

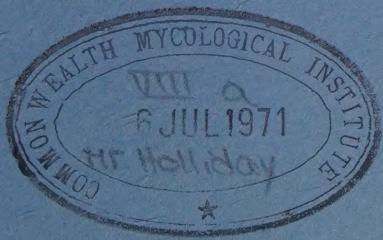
Volume 49

Title-page and Index

Issued June, 1971

Review of plant pathology

(formerly Review of
applied mycology)



REVIEW OF PLANT PATHOLOGY

(FORMERLY REVIEW OF APPLIED
MYCOLOGY)

Volume 49



COMMONWEALTH MYCOLOGICAL INSTITUTE

KEW, SURREY, ENGLAND

1970

COMMONWEALTH AGRICULTURAL BUREAUX

EXECUTIVE COUNCIL: V. ARMSTRONG, PH.D. (*Chairman*), New Zealand; E. S. KAPOTWE (*Vice-Chairman*), Zambia; D. J. PARKINSON, O.B.E., United Kingdom; J. L. ORR, Canada; E. G. HALLSWORTH, D.Sc., Australia; A. J. KIDWAI, India; T. A. KHAN, Pakistan; A. NESARATNAM, Ceylon; J. A. BLOBBEY, Ghana; Mrs. A. Z. ABIDIN, Malaysia; U. K. BELLO, Nigeria; (To be nominated), Cyprus; His Excellency the High Commissioner for Sierra Leone; (To be nominated), Tanzania; The Deputy High Commissioner for Jamaica; Mrs. L. S. DORSET, Trinidad & Tobago; (To be nominated), Uganda; His Excellency the High Commissioner for Kenya; W. D. SIMFUKWE, Malawi; O. A. SALLAH, The Gambia; R. E. CHANDISINGH, Guyana; His Excellency the High Commissioner for Botswana; The Deputy High Commissioner for Barbados; I. D. RAMTOHUL, Mauritius; E. E. KUNENE, Swaziland; D. M. KITCHING, Dependent Territories.

Dr. R. GLÉN, Secretary, Commonwealth Scientific Committee (Observer).

Secretary: SIR THOMAS SCRIVENOR, C.M.G.

Asst. Secretary: N. G. JONES, D.F.C.

COMMONWEALTH MYCOLOGICAL INSTITUTE

Director & Editor: A. JOHNSTON, B.Sc., A.I.C.T.A.; *Assistant Director:* C. BOOTH, PH.D.

Scientific Information Officers: P. BASU, B.Sc.; N. CHURCHICH, B.A., M.PHIL., DIP.SCI.; F. DUROCHER YVON, M.B.E., DIP.AGRIC.; P. HOLLIDAY, M.A.; E. B. MARTYN, B.A., A.I.C.T.A.; Mrs. P. H. REID, M.Sc.; Mrs. I. M. ROSS; S. R. K. SHARMAN, M.Sc.; J. M. WATERSTON, PH.D., A.I.C.T.A.

Mycologist: M. B. ELLIS, PH.D., *Assistant Mycologists:* Miss B. L. K. BRADY, PH.D.; F. C. DEIGHTON, O.B.E., M.A.; Miss J. A. HALL, B.A.; D. L. HAWKSWORTH, PH.D.; Miss J. E. M. MORDUE, PH.D.; J. L. MULDER, M.Sc.; Mrs. A. H. S. ONIONS, PH.D.; E. PUNITHALINGAM, PH.D.; A. SIVANESAN, PH.D.; Miss D. J. STAMPS, PH.D. (*Assistant Editor*); Miss P. M. STOCKDALE, B.Sc. (*Assistant Editor*); B. C. SUTTON, PH.D.; Mrs. M. TULLOCH, B.Sc.

Bacteriologist: J. F. BRADBURY, PH.D.

The Editor gratefully acknowledges assistance with this volume from Mrs. V. J. DRING, B.Sc.

LIAISON OFFICERS

UNITED KINGDOM: W. E. BERRY, B.Sc., PH.D., Agricultural Research Council, 160 Great Portland Street, London, W1N 6DT.

CANADA: G. M. CARMAN, B.S.A., M.Sc., PH.D., Director, Information Division, Department of Agriculture, 1105 Sir John Carling Building, Ottawa, Ontario.

AUSTRALIA: P. F. BUTLER, M.AGR.S.C., C.S.I.R.O., Box 225, Dickson, A.C.T. 2602

NEW ZEALAND: I. L. BAUMGART, B.A., B.Sc., Department of Scientific and Industrial Research, Private Bag, Wellington.

INDIA: B. P. PAL, M.Sc., PH.D.(Cantab), F.L.S., F.R.H.S., F.B.S., F.N.I., Director-General, I.C.A.R., Krishi Bhavan, New Delhi 1.

PAKISTAN: Director, Department of Plant Protection, Ministry of Agriculture and Works, Jinnah Avenue, Karachi.

© Commonwealth Agricultural Bureaux, 1971

All rights reserved. No part of this publication may be reproduced in any form or by any means, electronically, mechanically, by photocopying, recording or otherwise, without the prior permission of the copyright owner.

Printed in Great Britain by The Eastern Press, Ltd., London and Reading

CEYLON: J. W. L. PEIRIS, B.S.C., PH.D.(Lond.), D.I.C., DIP.AGR.(Lond.), Deputy Director of Agriculture (Research), Central Agricultural Research Institute, Cannoruwa Peradeniya.

GHANA: General Secretary, Council for Scientific and Industrial Research, P.O. Box M.32, Accra.

MALAYSIA: Permanent Secretary to the Ministry of Agriculture and Co-operatives, Swettenham Road, Kuala Lumpur, W. Malaysia.

NIGERIA: Director of Agricultural Research, Federal Department of Agricultural Research, Moor Plantation, Ibadan.

CYPRUS: R. C. MICHAELIDES, B.S.C.AGR.(Edin.), N.D.A., DIP.AGR.EC.(Oxon), Director-General, Ministry of Agriculture and Natural Resources, Nicosia.

SIERRA LEONE: Research Coordinator, Njala University College, Njala.

TANZANIA: Director of Agriculture, P.O. Box 9071, Dar-es-Salaam.

JAMAICA: W. G. STUART, M.SC., D.I.C.T.A., Chief Technical Officer, Ministry of Agriculture and Lands, P.O. Box 480, Kingston 6.

TRINIDAD AND TOBAGO: Chief Technical Officer (Agriculture), Ministry of Agriculture, Lands and Fisheries, St. Clair Circle, Port of Spain, Trinidad.

UGANDA: Commissioner of Agriculture, Ministry of Agriculture, Forestry and Co-operatives, Department of Agriculture, P.O. Box 2, Entebbe.

KENYA: Under Secretary, Ministry of Agriculture and Animal Husbandry, P.O. Box 30028, Nairobi.

MALAWI: P. BROWN, B.A.(Cantab), D.T.A., Chief Agricultural Research Officer, Ministry of Agriculture, P.O. Box 303, Zomba.

ZAMBIA: Permanent Secretary, Ministry of Rural Development, P.O. Box RW.197, Lusaka.

THE GAMBIA: L. J. MARENAH, B.S.C.AGR.(Dunelm), PH.D.(N'cle), DIP.AGR.(Cantab), D.T.A., Director of Agriculture, Department of Agriculture, Cape St. Mary.

GUYANA: H. A. D. CHESNEY, Principal Agricultural Officer (Research), Ministry of Agriculture and Natural Resources, Central Agricultural Station, Mon Repos, East Coast Demerara.

BOTSWANA: P. WEARE, Senior Agricultural Officer, Ministry of Agriculture, Private Bag 3, Gabarone.

BARBADOS: Chief Agricultural Officer, Ministry of Agriculture and Fisheries, Crompton Street, Bridgetown.

MAURITIUS: D. ROY, Chief Agricultural Officer, Agricultural Services, Reduit.

SWAZILAND: S. M. KUNENE, Under Secretary, Ministry of Agriculture, P.O. Box 162, Mbabane.

DEPENDENT TERRITORIES: A. R. MELVILLE, C.M.G., B.S.C., A.I.C.T.A., Agricultural Adviser, Overseas Development Administration, Eland House, Stag Place, London, S.W.1.

REPUBLIC OF IRELAND: J. DOHERTY, B.L., Department of Agriculture and Fisheries (Development Division), Dublin 2.

ERRATA

VOLUME 49

Abstract No. 86 line 4 for 'Sesbana' read 'Sesbania'

228 4 for 'Paullina' read 'Paullinia'
331f 1 for 'WHITEBREAD' read 'WHITBREAD'
459 1 for 'ROSENKRANTZ' read 'ROSENKRANZ'
587 9 delete '[quintozene]'
814 1 for 'SASTRI' read 'SASTRY'
827 1 for 'SIVA' read 'SIVAK'
852 1 for 'MARCHOU' read 'MARCHOUX'
858 8 for 'pensylvanica' read 'pennsylvanica'
904 1 for 'DEIGA' read 'DELGA'
965 1 for 'auxtrophic' read 'auxotrophic'
1055 5 after 'H'. insert '[Drechslera]'
1098 1 for 'BECKMAN, C. N.' read 'BECKMAN, C. H.'
1247f 1 for 'MERCETICH' read 'MIRCETICH'
1437 4 after 'earliana' insert '[D. earlianum]'
1661 2 for 'Myriothecium' read 'Myrothecium'
1663 1 for 'PINCKHARD' read 'PINCKARD'
1849 5 for 'Althea' read 'Althaea'
1910 1 for 'RISVI' read 'RIZVI'
2033 7 for 'Agropyrum' read 'Agropyron'
2063 1 for 'DEVADATH, S., DATH, P. A.' read
'DEVADATH, S., DATH, A. P.'
2082 1 for 'ADENJI' read 'ADENIJI'
2127 3 for 'BluemerIELLA' read 'Blumeriella'
2264 1 for 'BLASQUEZ' read 'BLAZQUEZ'
2285j 2 for 'polygram' read 'polyram'
2413 20 for 'ammonum' read 'ammonium'
2562 1-2 for 'Mycophaerella' read 'Mycosphaerella'
2578 1 for 'BHARDWAJ' read 'BHARADWAJ'
2728e 1 for 'clandestinum' read 'clandestinum'
3004 1 for 'ONDŘES' read 'ONDŘEJ'
3155 1 for 'LÓPEZ-ABELIA' read 'LÓPEZ-ABELLA'
3376 1 for 'CHAND, J. L.' read 'CHAND, J. N.'
3418 3 for 'Plasmopora' read 'Plasmopara'
3425 1 for 'JAMHARIA' read 'JHAMARIA'
3502 3 after 'brassicae' insert '[P. parasitica]'
3591 8 for 'increased' read 'decreased'
3720 5 for 'GalinosaGA' read 'Galinsoga'

INDEX OF AUTHORS

Aaron-Da Cunha, M. I., 850
 Aarvold, Ø., 1406, 1407
 Abbasi, R. M., 754
 Abdel-Azim, O. F., 2466
 Abdel Rahim, M. F., 3243
 Abd-El-Rehim, M. A., 1569, 1791, 2487
 Abdou, M. A.-F., 1197
 Abdu, Y. A. M., 2245
 Abdurachim, M. R. A., 2210
 Abelentsev, V. I., 1696, 2643
 Aberdeen, J. E. C., 242, 833
 Abiko, K., 3383
 Abo-El-Dahab, M. K., 12, 344, 522, 2161, 2298, 2303
 Abo-El-Nil, M. M., 344
 Abrahão, J., 1043
 Abramyan, D. G., 3009
 Abrasheva, P., 2141
 Abu Salih, H. S., 2485
 Acedo, G. N., 3380
 Aćimović, M., 3428
 Adair, C. N., 2774
 Adam, D., 1531
 Adams, A. L., 2006
 Adams, A. P., 2611
 Adams, F., 256
 Adams, P. B., 1972
 Adegbola, M. O. K., 297, 1215
 Adeniji, M. O., 2082, 3552
 Aderungboye, F. O., 2154
 Adversario, J. Q., 1359
 Advincula, B. A., 1359, 1360
 Aerts, J., 27270, 2933
 Agarwala, R. K., 3559
 Agataev, M., 2225
 Agnihothrudu, V., 3297
 Agnihotri, V. P., 41, 1301, 1494
 Agnistikova, V. N., 3606
 Agrawal, S. C., 3313
 Agrios, G. N., 339, 3380
 Aguiero, V. M., 3793
 Agulhon, R., 223
 Ahmad, Z. U., 1344, 2279
 Ahman, G., 1395
 Ahmed, A. M., 2189h
 Ahmed, N., 1045
 Ahmed, Q. A., 1045
 Ahrens, R. W., 5e, 3248
 Aichele, M. D., 1431
 Ainsworth, G. C., 1260a
 Aitken, W. B., 27
 Aizawa, T., 790
 Akai, S., 34, 141, 142, 734, 843, 1246, 1647, 1929, 1930, 1931, 2715, 3268
 Akhmerov, R. A., 727
 Alabouvette, C., 1822
 Alam, M. S., 2851
 Alam, S., 164
 Al-Ani, H. Y., 2438, 3181b
 Alavi, A., 2952
 Al-Beldawi, A. S., 2078, 3310
 Alberscheim, P., 1260g
 Albornoz, L. C., 2155
 Albouy, J., 400, 704
 Albrechtová, L., 536, 701, 2588, 2793, 2971
 Albuquerque, F. C., 227, 2955
 Alconero, R., 165, 1107, 1748
 Alcorn, J. L., 2899
 Aldrich, J., 3327
 Aldrich, R. A., 679
 Aleksandrov, I. N., 1057
 Alekseev, I. A., 2678
 Alekseeva, S. P., 2964
 Aleksić, D., 910j, 2275
 Aleksić, Z., 910j, 2275
 Aleshin, E. P., 2810
 Alexander, K. C., 3467
 Alexander, L. J., 563
 Alexander, M., 1925
 Alexander, M. T., 2292
 Alexandri, A. V., 796, 1487, 1541, 1548, 2535, 2551, 3593e
 Alexopoulos, C. J., 1294, 3145
 Alfaro M., A., 1253
 Alfieri, S. A., 330m, n, 3084a, g
 Alford, W. W., 744
 Al-Hassan, K. K., 1481, 1986, 3626
 Al-Hassan, S. A., 1481
 Ali, B., 2749
 Ali, M. A., 235c
 Ali, M. M., 164
 Allam, A. I., 1040, 1041
 Allam, E. K., 2244
 Allam, M. E., 2121
 Allard, C., 410, 599, 711
 Allen, A. S., 1778
 Allen, E. H., 2580
 Allen, J. D., 720
 Allen, R. M., 2068
 Allen, T. C., 5b, 498, 1053
 Allen, W. R., 1076
 Alliot, B., 3697
 Al Nur, E., 2490
 Alonso, A. B., 2597
 Alper, M., 2274
 Al-Shukri, M. M., 3306
 Alston, F. H., 2909, 2910
 Altmann, H., 1248h, i, 1993
 Aluko, M. O., 1642, 2476
 Alvarez-Garcia, L. A., 3624
 Amador, J., 1402, 1687
 Amani, B., 445, 1445
 Ambetsa, T., 2286a, j
 Ampratwum, D. B., 2430
 An, É. S., 3023

Anderson, L. P., 1660
 Anderson, N. A., 2878
 Andrade, A. C., 4
 Andreeva, É. N., 248, 841, 2172
 Andreeva, L. T., 225
 Andreichuk, T. V., 3309
 Andrews, J. H., 324u
 Andrianov, D. A., 822
 Andrieu, S., 1300
 Angell, F. F., 2652
 Angiolino, C., 170, 268
 Anglade, P., 3245
 Anilkumar, T. B., 3181a, 3787
 Anisimov, A. M., 883, 884
 Anjaneyulu, A., 317
 Ankora, J. K., 7, 3121
 Anokhin, V. M., 1452, 1757
 Anpilogov, M. Z., 2422
 Anselme, C., 1822
 Antonelli, E. F., 224
 Anzalone, L., 3466
 Aoki, A., 556, 2987
 Aoki, S., 2632
 Apinis, A. E., 1347
 Apparao, A., 3439, 3548
 Applegarth, D. A., 945
 Applegate, H. W., 275
 Aragaki, M., 806, 2760
 Arasu, N. T., 3279
 Argyle, E., 3152
 Arif, A., 3057
 Ariskina, N. P., 1013
 Armentrout, V. N., 9
 Armstrong, G. M., 422, 2885
 Armstrong, J. K., 422, 2885
 Arnott, H. J., 1144
 Arny, D. C., 3248
 Aronson, S. J., 1386
 Arsenijević, M., 1414
 Arsvoll, K., 615
 Arthaud, J., 780
 Artman, J. D., 1803
 Arx, J. A. Von, 3144
 Arzee, T., 331a, 3406
 Arzolla, J. D. P., 2871
 Asada, Y., 286, 592
 Asatiani, Sh. Sh., 2716
 Ashour, W. A., 2466
 Ashrafuzzaman, H., 3136, 3262
 Ashworth, F. L., 2660
 Ashworth, L. J., 3312
 Assawah, M. W., 1749, 2138
 Astier-Manifacier, S., 882
 Asuyama, H., 396
 Ataullah, M., 3196
 Atherton, J. G., 2798
 Atkins, P. S., 2307t
 Atkinson, J. D., 1418
 Atkinson, T. G., 2825
 Aubé, C., 695, 1411, 3137, 3363

INDEX OF AUTHORS

Aubury, R. G., 2101
 Augé, G., 910c
 Aujla, S. S., 1854
 Aulakh, K. S., 1488, 1568,
 3063, 3531, 3532
 Aussenac, G., 1811
 Avenard, J.-C., 718, 719
 Avizohar-Hershzon, Z.,
 1967, 3182a
 Avram, M., 2428
 Awasthi, D. N., 1861
 Awoderu, V. A., 2845, 3263
 Ayers, A., 3565a
 Ayers, J. E., 3083c, 3247
 Ayers, W. A., 28, 3515
 Ayerst, G., 3631
 Ayres-Offei, E. N., 3227
 Ayyavoo, R., 2712
 Azariah, M. D., 3446
 Azevedo, N. F. S., De,
 2190h

Baard, S. W., 3205
 Baba, T., 3524
 Babayan, D. N., 2032
 Babilas, W., 1537n
 Babos, P., 3471
 Babović, M., 1064, 2282f,
 2376, 2545, 3398, 3434
 Babur, G. I., 950
 Babushkina, I. N., 33
 Bachy, A., 3432
 Backman, P. A., 211
 Backus, M. P., 2900
 Bae, S. H., 2472
 Bækgaard, H. C., 914
 Bagga, D. K., 576, 3657
 Bagga, H. S., 2077
 Baggett, J. R., 3047
 Bagyraj, D. J., 3664
 Bahadur, P., 501
 Baicu, T., 1548
 Bailey, D. L., 46
 Bailey, J. A., 1203
 Bailey, R. L., 2003
 Bailiss, K. W., 3541
 Bailly, R., 3318
 Bain, D. C., 744
 Bais, B. S., 2960, 3636
 Bakalivanov, D., 1151
 Bakaric, M., 2658
 Baker, E. P., 3194
 Baker, J. E., 3628
 Baker, J. M., 2682d
 Baker, K. F., 1260, 1575a, c,
 2694
 Baker, R., 11, 628, 2771,
 3327
 Bakker, W., 2850
 Bakshi, B. K., 1499, 2671
 Balasubramanian, A., 3664
 Balázs, E., 2373
 Bald, J. G., 1288, 2091, 3751
 Baldacci, E., 531
 Baldridge, J. D., 510
 Baldwin, R. E., 783, 3565e
 Ball, E. M., 2371
 Ballesteros, A. M., 39, 1941
 Ballio, A., 1744
 Balliu, S., 355
 Balmer, E., 2870, 2871, 2872
 Bamdadian, A., 988
 Bancroft, J. B., 3151, 3166

Bang, F. B., 3149
 Baniecki, J. F., 2350
 Banihashemi, Z., 2333
 Banks, G. T., 83, 3726
 Bannerot, H., 619, 3518
 Bansal, R. D., 2276
 Bansal, R. K., 464
 Banttari, E. E., 117, 2836
 Barash, I., 1915
 Barat, H., 3739
 Baráth, Z., 656
 Baráthová, H., 655, 656
 Barbosa, M. A., De F., 3742
 Barbu, V., 1669
 Bareyre, M.-J., 676
 Bar-Joseph, M., 399, 2069,
 3799
 Barkai-Golan, R., 149
 Barksdale, T. H., 1150, 2181
 Barnes, G. L., 3411
 Barnett, O. W., 2525, 3557g
 Baron, J. M. Q., 2861
 Barrett, D. K., 571
 Barron, G. L., 2002
 Barros, M. L. De, 1026
 Barros N., O., 1739, 2564
 Barrow, J. R., 2488, 2865
 Bartels, R., 2282h, 3440
 Bartnicki-Garcia, S., 6
 Bartoš, P., 100, 101, 102,
 455, 3762, 3763
 Bartz, J. A., 2323
 Basak, W., 1537a, 2522w
 Basham, H. G., 3497
 Basham, J. T., 859
 Bashi, E., 1281
 Bashmakov, R. A., 948
 Basit, A. A., 3348
 Bassett, C., 273, 854
 Bassi, M., 404, 808, 3716
 Bassino, J. P., 1531
 Bastow, C., 3077c
 Basu, P. K., 3585
 Basu, P. S., 2356
 Basu, S. N., 1999
 Basuchaudhury, K. C., 501
 Bateman, D. F., 37, 1274,
 2232
 Bates, D. C., 2370
 Bath, J. E., 1198
 Batson, W. E., 3307
 Battershell, R., 3100
 Baudin, C., 3743
 Baudin, P., 2452, 3743
 Bauer, M., 1207
 Baumann, G., 2522v
 Bawden, F. C., 3729c
 Baxter, L. W., 1401, 2497,
 3324
 Bayley, J., 2364
 Baylis, G. T. S., 663
 Bazylev'ský, A. S., 1953
 Beals, H. O., 2199
 Beardsley, R. E., 331n
 Beccari, F., 1439, 2314
 Becerescu, D., 689, 3777
 Becker, W. A., 3496
 Beckman, C. H., 828, 1098,
 2134
 Beczner, L., 1409
 Bédard, R., 2285f
 Bedeković, M., 3508g, h
 Bedi, B. S., 326
 Bedi, P. S., 1662, 1854

Beever, D. J., 2527
 Beever, J. E., 3702
 Beever, R. E., 2751
 Begtrup, J. W., 544
 Behncken, G. M., 3720, 3723
 Behr, L., 664
 Békési, P., 2962
 Bell, A. A., 153, 2235, 3301
 Bell, D., 324r
 Bell, D. K., 784
 Bellando, M., 2764
 Bellemère, A., 2355
 Belli, G., 808, 1640, 1641,
 3168
 Belova, Z. F., 1037
 Beltrá, R., 39, 1941
 Bel'tyukova, K. I., 1545
 Belyakova, L. A., 969
 Bemiller, J. N., 133, 2847
 Benada, J., 450, 2409
 Benben, K., 1815
 Benda, G. T. A., 331b
 Bender, F. W., 1812
 Benedek, T., 384, 1293, 3132
 Benedict, W. G., 574
 Benedict, W. V., 2190a
 Benken, A. A., 1657, 1964
 Benlioğlu, N., 232
 Bennett, M., 1438, 2915
 Bent, K. H., 350
 Beny, R., 652
 Beraha, L., 204, 2944
 Beran, F., 912, 1872, 1897
 Berbeć, E., 1826
 Berbeć, J., 559
 Bercks, R., 700, 2142, 3151,
 3713
 Berg, G. H., 3459
 Berger, P., 1769
 Bergquist, P. L., 3149c
 Berker, J., 2308u
 Bernardi, B. J., 3550
 Bernaux, P., 138, 3371
 Berndt, H., 953
 Bernhard, R., 2522n, 3385
 Bernier, C. C., 3212
 Bertrandy, J., 533, 3441,
 3518
 Besemer, S. T., 2087
 Bétancourt, A., 513
 Betina, V., 655, 656
 Betto, E., 404, 3716
 Beute, M. K., 2088, 2129
 Bevan, D., 2190e
 Beyries, A., 3600
 Bézut, M., 3371
 Bhalia, H. S., 3680
 Bhama, K. S., 2251
 Bharadwaj, S. D., 2578, 3559
 Bhargava, K. S., 547, 2137
 Bhaskaran, S., 2712
 Bhatia, I. S., 2168
 Bhatnagar, G. C., 3641
 Bhatnagar, M. K., 3553
 Bhattacharya, K. K., 2007
 Bhattacharyya, J. P., 1999
 Bhatti, D. S., 2621
 Bhowmik, T. P., 3252, 3789
 Bhullar, G. S., 2040
 Bianco, M. A., 2764, 3607
 Biddle, P. G., 571, 2189i,
 Biehn, W. L., 2162, 2182,
 2607
 Bielenin, A., 1436

Biesbroek, J. A., 3389
 Bigornia, A. E., 1568
 Biguet, J., 1300
 Bilgen, T., 1510
 Bilgrami, K. S., 1990, 1991, 3559, 3675
 Bilgrami, R. S., 3559
 Bimpong, C. E., 3103, 3625
 Bingham, R. T., 579, 3496
 Biraghi, A., 2190c
 Birch, P. J., 3726
 Birchfield, W., 1270
 Bird, L. S., 2876, 3307
 Bird, R. J., 1505
 Biryukova, R. L., 653
 Bisht, N. S., 2522u
 Biswas, B. B., 2356
 Bitancourt, A. A., 3296
 Bitzer, M. J., 2419
 Björling, K., 3509
 Blaak, G., 1111
 Black, L. M., 1260d
 Blackburn, F., 2442
 Blair, S., 368
 Blake, J., 2772
 Blakebrough, N., 1887m
 Blakeman, J. P., 171
 Blanchini, P. R., 3551
 Blanpied, G. D., 793
 Blaszczałk, W., 2610, 2986
 Blattný, C., 5k, 1428, 2008a, 2523o, 2560, 3367
 Blazquez, C. H., 319, 919c, 2264
 Blindenbach-Ringers, A. C., 1892
 Bliznets, N. I., 1459
 Blodgett, E. C., 1431
 Blomquist, M., 3628
 Blomqvist, H., 3753
 Bloom, J. R., 376b, 1069
 Bloomberg, W. J., 1178
 Bloss, H. E., 2350
 Blumenbach, D., 920
 Bobyr, A. D., 1756
 Boccas, B., 89, 2785
 Bochow, H., 1318, 3187, 3744
 Bock, K. R., 1, 2286a, j
 Bockmann, H., 2282j
 Bode, O., 2282f
 Boelema, B. H., 2890
 Boerema, G. H., 3133, 3674
 Boesewinkel, H. J., 3737
 Bogomolova, L. O., 1920
 Bohaychuk, W. P., 394
 Boisson, C., 675, 676
 Bojarczuk, J., 1352
 Bojanský, V., 2008d, 2599
 Bokhyan, M. V., 2100
 Boland, P., 2411
 Bolander, W. J., 2150
 Bolkvadze, Z. A., 1356, 2461
 Bolland, E. G., 2751
 Bollen, G. L., 1292
 Bollen, W. B., 260a, c
 Bolwyn, B., 2932
 Bonpeix, G., 515
 Bonatti, P., 3168
 Bond, W. P., 3174
 Bondar', I. A., 3392
 Bondoux, P., 1711, 3378
 Boninsegna, J., 318
 Bonney, J. K., 1265
 Bontea, V., 1342
 Boosalis, W. L., 2028a
 Booth, C., 64, 1975
 Bor, N. A., 3564d
 Bordás, B., 1550, 2315
 Borde, K., 2575
 Borduge, J., 3594e
 Bordukova, M. V., 826
 Borecka, H., 1436, 3643
 Borecki, Z., 1537j, 2110
 Borges, M. De L. V., 821, 910k, 1026
 Borisenko, A. N., 1329, 2421
 Borisenok, A. B., 2602
 Borodin, G. I., 2792, 3629
 Borovskaya, M. F., 560
 Borsica, I., 991
 Börtitz, S., 985, 2401
 Bos, L., 781, 1538k, s, 2008g, 2012, 2727p, 3514
 Bose, A., 98, 3315
 Bose, S. K., 1713, 1742
 Bosmans, P., 2085
 Bosshard, H. H., 2682a
 Bot, J., 1266
 Boteanu, S., 355
 Bottalico, A., 1744, 2144
 Boubals, D., 1443
 Bouchet, R. L., 3593a
 Bouhot, D., 306
 Bould, C., 1697
 Boulard, L., 619
 Boulard, B., 357
 Bourdin, J., 1422
 Bourke, P. M. A., 1457
 Bourne, B. A., 2625
 Bourret, J. A., 2328
 Boutillet, G. C., 2881
 Bové, C., 331c
 Bové, J. M., 331c, 706, 2858
 Bowen, J. E., 2627
 Bowling, P. J., 1794
 Bowman, M. S., 3195
 Bowman, T., 1038
 Bowyer, J. W., 2798
 Boyd, A. E. W., 235a
 Boyd, W. J. R., 1007, 1620
 Boyle, A. M., 282, 2776
 Boyle, J. S., 209, 2263, 3083g
 Bozarth, R. F., 3083a, 3517
 Bozoian, G., 945
 Bracker, C. E., 3143
 Bradbury, J. F. 3090; p. 213
 Bradley, R. H. E., 3155
 Brakke, M. K., 2010y, 2371, 2633, 3192
 Brambl, R. M., 1938, 2754
 Brandes, J., 2282f
 Brandes, W., 3769
 Brandon, B. A., 2292
 Brandon, D. M., 3796
 Brannaman, B. L., 132
 Brantley, B. B., 3056
 Brants, D. H., 82, 3341
 Braud, M., 1665
 Braun, A. J., 215
 Braverman, S. W., 3682
 Bravery, A. F., 2685
 Bravo, A., 1844
 Bray, V., 1157
 Brčák, J., 1760
 Breck, L. O., 3710
 Brendel, G., 2282 l, 3420
 Brennan, E., 1061, 1578

Breuel, K., 1796
 Breuils, G., 630
 Britton, M. P., 3357
 Broadbent, L., 1248a, 2010bb
 Broadbent, P., 3273
 Brodia, B. B., 2027b
 Broembsen, S. Von, 2320
 Brogan, J. C., 635c
 Bromfield, K. R., 3062
 Brönnimann, A., 1609, 2043, 3209
 Brookes, R., 1887b
 Brooks, A. G., 3633
 Brooks, A. V., 1389, 3322
 Browder, L. E., 992
 Brown, A. G. P., 761, 2799
 Brown, A. L., 3564
 Brown, D. H., 3037
 Brown, G. A., 203
 Brown, I. F., 2308r, 3565c
 Brown, J. F., 105, 107, 2815
 Brown, M., 3077b
 Brown, M. F., 2730, 2731
 Browning, J. A., 1260o, 2028d
 Browning, R. E., 3517
 Brücher, H., 2970
 Brückner, F., 2831
 Brugovitzky, E., 991
 Brunin, B., 1822, 3504
 Brunin, C., 1448
 Brunt, A. A., 909m, p. 3151, 3730c
 Bryan, W. C., 266, 2746, 3112
 Buchanan, D. W., 2539
 Buchannon, K. W., 113
 Buck, K. W., 83, 2381, 3726
 Buckley, P. M., 154, 2752
 Budd, K., 331d
 Buga, S. F., 1614
 Bugaret, Y., 1524
 Bugbee, W. M., 2080
 Buimistru, V. E., 3419
 Buijas, M., 2366, 3718
 Bulatova, Z. G., 3019
 Bullivant, S., 1667
 Bumbieris, M., 1839, 3659
 Bunescu, S., 2428
 Buonocore, V., 1744
 Burdekin, D. A., 2189a, 2308o, 2668
 Burden, O. J., 803, 1736
 Burke, D. W., 602, 1202, 1213, 2227, 2696
 Burleigh, J. R., 431, 3198
 Burmeister, P., 2528
 Burnett, E., 3311
 Burnett, J. H., 1254
 Burns, D. J. W., 3149c
 Burns, R. M., 3800
 Burrage, S. W., 1324
 Bur-Ravault, L., 759
 Burrows, V. D., 2047
 Burth, U., 2310, 2567
 Burwood, R., 1945
 Busch, L. V., 324p
 Bushkova, A. N., 2964
 Bushkova, L. N., 302
 Bushnell, W. R., 2036
 Bussel, J., 29
 Butcher, J. A., 175
 Buthala, D. A., 3695

INDEX OF AUTHORS

Byford, W. J., 3077c
 Byrde, R. J. W., 351, 946,
 2307y, 3079c, 3374
 Byrom, N. A., 2668

Cabanne, F., 3707
 Cábulea, I., 740
 Čača, Z., 1458, 3219, 3332,
 3508n
 Cadman, C. H., 2010c
 Calam, C. T., 1887h, p
 Calavan, E. C., 1649
 Callao, V., 1442
 Calonge, F. D., 691, 937
 Calpouzos, L., 595, 3120
 Calvert, O. H., 510, 607,
 2463, 2962
 Camargo, I. J. B. De, 2698
 Cameron, H. R., 1721, 2194
 Cameron, N., 970
 Campacci, C. A., 1239, 1372
 Campbell, A. I., 1697, 2523 I
 Campbell, F. J., 168, 3336
 Campbell, R., 2349, 2788,
 3138
 Campbell, R. N., 1187,
 1308, 2757
 Campbell, W., 2308j
 Campbell, W. A., 2334, 3354
 Campbell, W. V., 2711
 Campeglia, O. G., 2946
 Campos, H. R. De, 1535
 Camprag, D., 3508a
 Caner, J., 1533
 Canerday, J. V., 3250
 Cannon, H. B., 3043
 Canova, A., 3508i
 Cantino, E. C., 6
 Kapoor, S. P., 3285, 3399
 Caporali, L., 518
 Cappelini, R. A., 362
 Carasso, F. M., 2221
 Cardin, L., 910f
 Caresche, L., 3574
 Carilli, A., 1744
 Caro, J. H., 376c
 Caroselli, N. E., 3630
 Carpenter, B. H., 2328
 Carraut, A., 2902a
 Carroll, R. B., 783, 1069
 Carter, A. L., 2261, 3555i,
 k, n
 Carter, A. R., 1489
 Carter, M. V., 799
 Cartia, G., 2998, 3007, 3276
 Cartwright, J., 351, 2308i
 Carvalho, A. De, 2872
 Carvalho, P. P., 1384
 Casady, A. J., 469
 Casagrande, F., 1164
 Casallí, V. W. D., 1535
 Casarini, B., 3484
 Casper, R., 2382, 2498
 Cass Smith, W. P., 3015
 Castaño, A. J. J., 742, 743,
 907
 Castelain, C., 1729
 Castellano, M. A., 2014,
 2508
 Castro, S., 1394
 Cártara, A., 3275, 3724
 Cater, C. M., 3307

Catherall, P. L., 2431, 3229,
 3230
 Catling, H. D., 3277
 Catling, W. S., 2307z
 Cauquil, J., 2874, 3298a
 Cavalieri, P. A., 2869
 Cayuela, J. C., 2861
 Cessac, M., 1268
 Cetas, R. C., 1754c
 Cevario, S. J., 3062
 Chabert, J., 1882
 Chaddha, K. C., 1781
 Chagas, C. M., 557, 1533
 Chahal, D. S., 85a, 3181a
 Chain, E. B., 83, 3726
 Chakrabarti, N. K., 2059
 Chakrabarty, R. P., 1132
 Chakravarti, B. P., 3181a,
 3787
 Chalker, F. C., 525
 Chalutz, E., 1528, 1841
 Chamberlain, D. W., 2239
 Chamberlain, E. E., 1418
 Chamberlain, J. D., 2133
 Chambers, J., 2523k
 Champion, R., 3746
 Chan, J. Y.-H., 3429
 Chance, W. F. J., 2618
 Chancogne, M., 353, 1269,
 3599
 Chand, J. N., 1244, 1709,
 2650, 2722, 3211, 3376
 Chandler, P. A., 2091
 Chang, S.-C., 3237a, b, c, d
 Channamma, K. A. L., 715,
 3671
 Channon, A. G., 1233,
 3555a, b, c
 Chant, S. R., 1515, 2370
 Chantanao, A., 1893
 Chantarasrikul, A., 419,
 3733
 Chanturiya, N., 2536
 Chapman, R. A., 181
 Chapot, H., 2389c
 Chardenon, J., 3488
 Chardymskaya, A. V., 1511
 Charifi, M., 353
 Charpentier, J., 1028
 Charudattan, R., 1031, 2486
 Chatrath, M. S., 1597, 2759,
 3719
 Chaube, H. S., 1968
 Chaudhary, K. C. B., 2727w
 Chaudhuri, S., 326
 Chauhan, L. S., 1022, 1336
 Chauhan, M. S., 1661
 Chee, K. H., 831, 2165d,
 2166, 2389b
 Cheek, E., 608
 Chein, H. S., 1097
 Chekurdia, A. I., 1953
 Chel'yshkina, B. A., 499
 Chen, C.-C., 1155
 Chen, C. H., 1479
 Chen, C.-K., 3237d
 Chen, D.-W., 3623
 Chen, L. I., 1735, 2561
 Chen, M., 1017
 Chen, S. S., 1100, 1101
 Chen, T. A., 3083b, 3240
 Cheney, P. W., 1431, 2106
 Cheng, Y.-H., 1046, 1659,
 2079

Chenulu, V. V., 243, 2026,
 3379
 Cheo, P. C., 2076
 Chepenko, L. I., 2792
 Cherepanova, N. P., 2784
 Cherepkova, N. A., 2122
 Cherewick, W. J., 113
 Chesters, C. G. C., 2835
 Chet, I., 390
 Chiapparini, L., 1554
 Chiara, L., 3180
 Chiba, I., 1220
 Chiba, O., 2200
 Chiba, S., 1366
 Chidester, J. L., 1563
 Chien, M.-M., 550
 Chigrin, V. V., 723
 Child, J. J., 2767
 Childers, N. F., 2539
 Chin, W., 1478
 Chin, W. T., 2308c
 Ching, P. C., 3469
 Chionishio, I., 1245
 Chiplonkar, A., 694
 Chipman, E. W., 3043
 Chittenden, E. T., 2913
 Chiu, K.-Y., 141
 Chiu, R.-J., 3465
 Chiykowski, L. N., 430,
 1408, 2387
 Chkheidze, D., 2536
 Chládek, Z., 3593h
 Chod, J., 593, 1825, 2889,
 3508j
 Chohan, J. S., 2254, 3181a
 Chona, B. L., 243
 Chopra, B. K., 1969, 3130
 Chou, C. K., 956, 2216
 Chou, T. G., 1021
 Chouhan, L., 3559
 Chowdhury, S. R., 3559
 Christensen, C. M., 638,
 1104, 2469, 2478
 Christie, R. G., 2248
 Christie, S. J., 3165
 Christie, S. R., 1313, 2248
 Christoff, A., 2523b
 Chrzanowski, J., 3508c
 Chuang, C.-M., 1212
 Ciccarone, A., 2399, 3075
 Ciegler, A., 20
 Cimanowski, J., 1423, 2105
 Cirulli, M., 563, 564, 565,
 568, 910h, 1840, 2183,
 2278, 2655
 Civerolo, E. L., 1728
 Clamot, G., 738
 Clare, B. G., 3227
 Clark, A. G., 2302
 Clark, D. C., 2307w
 Clark, G. A., 3577
 Clark, M. C., 324n
 Clark, R. V., 2834
 Clarke, J. H., 1252
 Clary, R., 35
 Clayton, E. E., 1483
 Clemencet, Y., 2911
 Clement, E. L., 108
 Clements, L. L., 30
 Clerk, G. C., 7, 3103, 3121,
 3625

INDEX OF AUTHORS

Clifford, D. R., 351, 1898, 23081
 Cloninger, F. D., 2463
 Close, D. C., 2237
 Close, R. C., 603
 Cochran, G. W., 1563
 Cochrane, J. C., 331e
 Cochrane, W. W., 331e
 Cock, L. J., 310
 Codner, R. C., 1887k
 Coffey, M. D., 98, 331f, 3315, 3486
 Cohen, J., 2069
 Cohen, M., 330e
 Cohen, S., 3704
 Cohen, Y., 331a, 1532, 2175, 3406
 Cohn, E., 2143
 Cole, A. L. J., 1274, 1940, 2072, 2758
 Cole, G. T., 332d, 972, 1302
 Cole, H., 125, 376b, 2097, 2263, 2451
 Cole, J. R., 267
 Cole, J. S., 558a
 Coley-Smith, J. R., 1229, 2330
 Colhoun, J., 2307i
 Collingwood, E. F., 3731c
 Collins, C. H., 3146
 Collins, F. C., 108
 Collins, R. P., 372
 Colotel, N., 324k
 Colville, W. L., 2028a
 Coman, T., 2524, 2551
 Comstock, V. E., 2878
 Conroy, R. J., 1103
 Conti, E. De, 2071, 2871
 Conti, G. C., 1562
 Conti, M., 1581, 1626, 2013
 Converse, R. H., 216
 Cook, A. A., 14
 Cook, R., 2307n
 Cook, R. J., 2410, 2800, 3666
 Cooke, B. M., 111, 2823, 3208, 3730b
 Cooke, R. C., 31, 369, 2329
 Coon, D. A., 2752
 Cooper, J. I., 3557h
 Cooper, K. M., 786
 Coral, F. J., 2806
 Corbaz, R., 967, 996, 2641
 Corbett, M. K., 3565b
 Corbin, J. B., 3737
 Corda, P., 290
 Cordell, C. E., 274, 275
 Corke, C., 324d
 Corlett, M., 3372
 Cornelis, J. J., 3118
 Cornuet, P., 882
 Corsini, D., 3644
 Corte, A., 660, 2522s
 Cortés-Monllor, A., 2710
 Costa, A. S., 762, 2010d, 2648, 2698
 Costache, M., 627
 Costonis, A. C., 1177
 Cotterell, G. S., 3574
 Cotton, R. F., 2654
 Couey, H. M., 2132
 Counter, B. F., 299
 Courtois, H., 3498
 Cousin, M.-T., 354, 497, 600, 712, 765, 2930
 Cousin, R., 410, 599, 711
 Coussirat, J.-C., 3476
 Coutts, M. P., 283, 876, 1495
 Covey, R. P., 200, 1720, 2335
 Cowan, J. W., 2449
 Cox, A. E., 2612
 Cox, E. A., 168
 Cox, R. S., 1678
 Coyle, E., 1851
 Craft, C. C., 760
 Craig, A. S., 2365
 Craig, H. M., 324v
 Craig, J., 463
 Crandall, B. S., 3740
 Crandall, P. C., 2133
 Crane, G. L., 595
 Creemers, J., 708
 Cretenet, S., 3318
 Criley, R. A., 3334
 Crişan, A., 947, 1241, 3139
 Cropley, R., 1074a, b, 1724, 2522c, m, y
 Crosier, D. C., 3048
 Crosier, W. F., 3048
 Cross, M. J., 634
 Crossan, D. F., 2006
 Crossa-Raynaud, 2902a, b
 Crosse, J. E., 1091
 Crowe, A. D., 1072
 Crowley, N. C., 3519
 Croxall, H. E., 3373
 Crüger, G., 2266, 2282k
 Cruz, B. P. B., 1043, 1535, 2185, 3550
 Cuany, A., 221
 Cuillé, J., 759
 Cunfer, B. M., 503, 2519
 Cunningham, P. C., 635f
 Cupsa, I., 2427, 2428
 Curl, E. A., 1918, 2773, 3130
 Curren, T., 670, 2272
 Curtis, C. R., 40
 Curtis, P. J., 359
 Czabator, F. J., 2003, 3686
 Czyżewska, S., 1044, 2148

Dăbală, I., 1005, 1006
 Dabler, J. M., 133
 Da Costa, E. W. B., 2691
 Da Costa, J. C., 3049
 Dadant, R., 917b
 Dade, H. A., 340
 Daebeler, F., 2282d, 2559
 Daft, M. J., 936
 Daftari, L. N., 3425
 Daines, R. H., 3750
 Dakshinamurthi, V., 2474
 Dale, J. L., 1314, 2025
 Dale, W. T., 3373
 Dally, M., 2752
 Dalmasso, A., 221
 Dalton, F. N., 3658
 Damaschke, K., 2688
 D'Ambra, V., 1733
 Damirdagh, I. S., 2015, 3164
 Danesh, D., 1519
 Danielson, R. M., 1971
 Danon, M., 3508h
 Darby, J. F., 1824

Darbyshire, J. E., 83, 3726
 Darbyshire, J. F., 2357
 Dargent, R., 673
 Darlow, H. M., 1887f
 Darpoux, H., 915, 3745
 Darrag, I. E. M., 159
 Das, A., 1279
 Das, A. M., 1332
 Dasgupta, S. N., 334
 Dashwood, P., 3557b
 Da Silveira, A. P., 1043
 Da Silveira, S. G. P., 1043
 Dässler, H.-G., 985, 2401
 Dath, A. P., 2063, 2854
 Daubeny, H. A., 1435
 Davet, P., 716, 982
 Davey, C. B., 1971
 Davidson, J.-G., 2659
 Davies, J. D., 3125
 Davies, J. M. L., 2425, 2441
 Davis, D., 940, 1919
 Davis, D. D., 857
 Davis, D. R., 330i, 3687
 Davis, S. H., 1672
 Davis, T. C., 2199
 Davison, E. M., 3163, 3519
 Dawood, N. A., 3243
 Day, A. W., 30
 Day, R. H., 203
 Dayal, R., 1944, 2090, 2763, 3559, 3785
 Deacon, A. C., 351
 Deakin, M. A. B., 2307p
 Dean, J. L., 919d, 2980
 Dean, W. M., 441
 De Bode, R., 3341
 De Boever, J., 2727r
 De Bokx, J. A., 1538v, 2593, 2727s
 Deconinck, G. O., 2165e
 Dedan, J. K., 2286m, n
 Défago, G., 2767
 Defosse, L., 2a, 3210, 3772
 Dehlavi, A., 900
 Dehyar, K., 1242, 2860
 Deiga, A.-M., 904
 Deighton, F. C., 2901
 De Kam, M., 1802
 Dekker, J., 646, 3068
 Delova, Z. F., 1037
 Delvecchio, V. G., 967
 Demaire, B., 3325
 Demkiv, O. H., 1762
 Demski, J. W., 209, 312
 Denbnovetskii, G. Yu., 2127
 Den Held, A. J., 18
 Denis, S. J., 1692
 Dennis, C., 2679
 De Ramallo, N. E. V., 467
 De Rooy, M., 2893
 Derzhinskii, A. R., 3606
 Desai, B. G., 1862, 2217
 Desbailletm, C., 2570
 De Sequeira, O. A., 1074c, 1075
 Deshpande, K. S., 3620
 Deshprabhu, N. N., 2877
 De Silva, R. L., 244, 927
 Desjardins, P. R., 68, 1373
 Desmarreau, R., 2285j
 Deubert, K., 1015
 Devadath, S., 2854
 Devauchelle, G., 1315
 Devaux, A., 2285a, h, i

INDEX OF AUTHORS

Devay, J. E., 154, 211, 3303, 3304, 3305
 Devergne, J.-C., 910f
 De Vries, C., 2727d
 Dewey, D. H., 205
 Dewolfe, T. A., 1024, 3800
 De Zoeten, G. A., 2377
 Dhanraj, K. S., 446, 3226
 Dhanvantari, B. N., 1434, 2912
 Dhillon, P. S., 2040
 Diamond, A. E., 331g
 Dias, H. F., 324x
 Dias F., I. R., 3049
 Díaz-Mugica, V., 301
 Dickens, J. S. W., 3235
 Dickens, L. E., 299
 Dickey, R. S., 3328
 Dickinson, S., 939
 Dieleman-Van Zaayen, A., 1536, 1538p, 3076, 3554
 Diem, H. G., 3222
 Dijkstra, J., 840, 866, 3021
 Di Menna, M. E., 2517
 Dimitri, L., 2681
 Dimitrijević, B., 2453
 Dimitrijević, M., 3508s
 Dimock, A. W., 5f
 Dimond, A. E., 2182
 Dinescu, I., 1321
 Dingley, J. M., 2237
 Dinoor, A., 2048
 Diomandé, T., 2305
 Dirks, V. A., 2417
 Dishon, I., 2718
 Dixon, G. M., 310
 Djakamihardia, S., 3246
 Djavadi, F. H. S., 766, 1664
 Dobretsov, A. N., 896
 Dobrozkova, T. L., 342
 Docampo, D., 2645, 2647
 Do Carmo-Sousa, L., 1539b
 Docea, E., 771
 Dochinger, L. S., 584, 1812, 2680
 Dodel, J. B., 1268
 Dodman, R. L., 1038
 Doi, Y., 396
 Doke, N., 1134, 2795, 3698
 Doležal, J., 3593b
 Dolezal, J. E., 1495
 Dolidze, M. I., 2465, 2651
 Doling, D. A., 2405
 Dolzmann, H., 2575
 Doma, S., 2316
 Domański, S., 2687
 Domsch, K. H., 1957, 1958, 3656
 Donadze, V. Z., 2965
 Donaubauer, E., 2190f
 Donchey, N., 1593
 Dongo D., S. L., 1417
 Doosdon, J. K., 1008, 2307b, 2405, 2808
 Dore, W. G., 2066
 Dorenbosch, M. M. J., 3673
 Dormal-Van Den Bruel, S., 3594c
 Dorne, B., 703
 Dorovskaya, L. M., 460
 Dorozhkin, N. A., 569
 Dörr, I., 935
 Dorworth, C., 1049
 Douce, R., 897
 Douchet, J. P., 1422
 Douglas, D. R., 3545
 Dounine, M. S., 2523c
 Doupnik, B., 1009
 Dow, R. L., 613
 Dowley, L. J., 635b, 1765
 Downes, M. J., 2608
 Drake, R. J., 1373
 Drandarevski, C. A., 597, 890
 Dransfield, M., 328
 Draper, H. D., 2931
 Draxler, H., 1993
 Drezgić, P., 1014
 Driver, C. H., 1556, 3030
 Drobishchenko, N. I., 348
 Drover, D. P., 1579
 Drozdovskaya, L. S., 169
 Druett, H. A., 974
 Drysdale, R. B., 123
 Dube, S. D., 1716
 Dubey, H. D., 2984
 Dudenko, V. P., 3797
 Dudka, I. O., 1544
 Duff, A. D. S., 3433
 Duffus, J. E., 903, 1191, 1819
 Duffus, J. F., 81
 Dufour, D., 1260b
 Duich, J., 2097
 Dukes, P. D., 1261
 Dumitras, L., 689, 968, 1343
 Dumitrescu, D., 2814, 3513
 Dumitrescu, E., 2695
 Dunenko, M. A., 3220
 Dunetz, J., 189, 1698, 3330, 3384
 Dunin, M., 1387
 Dunleavy, J., 2028c
 Dunleavy, J. M., 1222, 1850, 3054, 3528
 Dunning, R. A., 3077p
 Dupont, G., 706
 Duran, R., 1058
 Duranton, H. M., 331s
 Durbin, R. D., 2297
 Durgapal, J. C., 639, 779, 1751, 2961
 Durkee, T. L., 2039
 Durnerin, A., 3390
 Duteil, M., 617, 619
 Duthoit, J.-L., 852
 Dutt, B. L., 823
 Dvukhshertsov, M. G., 2643
 Dwivedi, R., 2578, 3559
 Dwivedi, R. S., 3559
 D'yakov, Yu. T., 1143, 3601
 D'yakova, G. A., 1540
 Dyck, P. L., 3197
 Dye, D. W., 393, 603, 1888
 Dzagnidze, Sh. I., 2541
 Dzhokhandze, N. S., 2646
 Dzhuraeva, Z., 3366
 Easton, G. D., 46
 Eaton, G. W., 1735, 2561
 Eaves, C. A., 2115
 Ebbels, D. L., 2828
 Ebbens, M. H., 909c, i, 1489, 2308b
 Eberhard, E. D., 2568
 Ebrahimi, A. G., 507
 Echandi, E., 2228
 Eckert, J. W., 2739, 3098
 Edgington, L. V., 324d, 2699
 Edie, H. H., 1534
 Edmonds, R. L., 3030
 Edmunds, L. K., 469
 Edwards, D., 1182f
 Edwards, H. H., 3221
 Edwardson, J. R., 2212, 2248, 3165
 Effland, H., 2307e, 2727c
 Egan, B. T., 1128, 2620, 3464
 Egawa, H., 142, 1929, 1931, 2766
 Eggert, D., 853, 2649, 3000, 3001
 Eiggins, H. O. W., 2791
 Egli, T. A., 1785
 Eglitis, M., 2336
 Egorova, E. N., 1601
 Ehara, Y., 1565, 2378
 Ehle, H., 999
 Ehrlich, H. G., 2037
 Ehrlich, M. A., 2037
 Eklund, C., 1256
 Ekundayo, J. A., 32, 387, 1988
 El-Adawy, A. A., 2126
 Elarosi, H., 566, 1569, 1784, 1791
 Elarosi, H. M., 2271, 2280
 Elazegui, F. A., 693
 El-Dohlob, S. M., 2337
 Eldridge, C., 1925
 Elec, J. V., 1360
 Elenkov, E., 2265
 Elewa, I. S., 3536
 Elgersma, D. M., 1792, 3013
 El-Goorani, M. A., 12, 522, 2161, 2298
 El-Haidari, H. S., 3731b
 El Hammady, M., 1475
 El-Helaly, A. F., 344, 2298, 2303
 Elia, M., 2482
 Eliade, E., 772, 1669
 Eliashvili, P. K., 2670
 Elings, H., 2308v
 Eliseeva, Z. N., 80
 El-Kazzaz, M. K., 2303
 El Khalifa, M. D., 3588
 Ellans'ka, I. O., 1921
 Ellingboe, A. H., 1605
 Elliott, C. R., 1690
 Elliott, E. C., 1887a
 Elliott, E. S., 783
 Ellis, J. J., 332e
 Ellis, M. B., 3131
 El Nur, E., 2485, 2490, 3052, 3300
 El Nur, E. E., 3588
 El-Rifai, I. F., 2126
 El-Shafey, H. A., 3243
 El-Shamy, M. R., 2244
 El-Sharkawy, T., 489
 Elsworth, R., 1887d
 El-Zik, K. M., 2876
 Emge, R. G., 2004, 3688
 Emmatty, D. A., 680, 1289
 Engelhard, A. W., 330r, s
 English, H., 1086, 3393
 English, P. D., 1260g
 Engmann, F., 985, 2401
 Engstrom, G. W., 1946

Epstein, A. H., 3329
 Ercegovich, C. D., 125, 2451
 Ercolani, G. L., 1722, 1723,
 1840
 Ercolani, L., 3484
 Érentraut, É., 3601
 Ermekova, B. D., 1000
 Erokhina, S. A., 2160
 Ershad, D., 625, 1530, 2717,
 2862
 Erwin, D. C., 487, 538, 649,
 1042, 1950
 Esau, K., 249, 696
 Eshed, N., 3214
 Eskandari, F., 91, 910d,
 1393
 Espinasse, H., 908
 Esquerré-Tugayé, M.-T., 666
 Etheridge, D. E., 324v
 Etheridge, J., 1612
 Eusebio, M. A., 587
 Evans, E., 2307d
 Evans, G., 1752
 Evans, L. E., 1326
 Evans, R. N., 922
 Evans, S. G., 116
 Eveling, D. W., 1761
 Everett, T. R., 2010p
 Eversmeyer, M. G., 3198
 Ewan, J., 341
 Exconde, O. R., 693, 1359,
 1360, 3223
 Eyal, Z., 1915
 Ezrukh, É. N., 33
 Ezuka, A., 2852

Faccioli, G., 1732
 Fadl, F. A., 3243
 Fagbenle, H. H., 2380, 3530
 Fahim, M., 2245
 Fajemisin, J. M., 463
 Fanse, H. A., 2478
 Farkas, G. L., 642, 1248f
 Farley, J. D., 380
 Farris, S. H., 3038
 Farro, A., 411, 1838
 Fassi, B., 21, 22, 3614
 Fatmi, A. S., 328
 Faulkner, L. R., 2150
 Favali, M. A., 404
 Favre-Amiot, A., 2930
 Favret, E. A., 1248b
 Feakin, S. D., 3258, 3771
 Feder, W. A., 241, 3345
 Fedorinchik, N. S., 681,
 1511, 1614
 Fedorov, N. I., 3106
 Fedotova, T. I., 1459, 2326
 Fegla, G. I., 566, 1784
 Feldman, J. M., 318
 Fenton, T., 2883
 Férault, A. C., 533, 3441,
 3518
 Férault, C., 910i
 Fergus, C. L., 1986, 2359
 Fernández Valiela, M. V.,
 1258
 Fernow, K. H., 1758, 2595
 Ferretti, R. J., 3301
 Festić, H., 2548, 2549
 Fiedorow, Z., 2986
 Fieldgate, D. M., 351
 Fielding, A. H., 946
 Fiers, W., 2727r
 Fife, J. M., 887
 Figueiredo, E. R. De, 4
 Figueiredo, M. B., 581, 632
 Filer, T. H., 864, 3011, 3016
 Findlay, J. B. R., 1266
 Finniss, T. M., 3030
 Firman, I. D., 2400, 2403,
 2937
 Firsov, V. F., 2609
 Fischer, H., 2528
 Fischer, J. A., 1247b
 Fischer, R., 3774
 Fisher, D. J., 363
 Fisher, F. E., 2073
 Fister, G. M., 1563
 Fitzpatrick, J., 76
 Fitzsimmons, R. W., 986
 Flanagan, P. W., 1985
 Flannigan, B., 1346
 Fleischmann, G., 386, 455,
 3189
 Flentje, N. T., 389
 Fletcher, J. T., 252, 324t,
 2997
 Fliege, F., 2554
 Flores, E., 1533
 Flores, J. M., 181
 Floridi, A., 1208
 Fodda, A., 145, 146, 147
 Fogle, H. W., 1247f
 Fokkema, N. J., 3341
 Foley, D. C., 2028b
 Follin, J. C., 768, 3298a
 Fonnesbech Johnsen, A.,
 1427
 Fontana, A., 21, 22, 3613,
 3614
 Forbes, A. R., 1754d, 2010j,
 2157
 Ford, D. H., 1095
 Ford, E. J., 1970, 2770
 Ford, R. E., 79, 1625, 2380,
 2707, 3529, 3530
 Foroughi, M., 3632
 Forsberg, J. L., 776, 3339
 Forsyth, F. R., 2115
 Fortin, J. A., 2747
 Foschum, H., 1116
 Foster, R. E., 1153
 Fougerousse, M., 1182g
 Fournet, J., 2288
 Foursoff, P. I., 2308v
 Fouse, D. C., 760
 Fowell, R. R., 1539f, h
 Fowler, C. W., 3495
 Fowler, D. P., 2207
 Fox, E., 3557b
 Fox, F. L., 1812
 Fox, R. L., 3469
 Francki, R. I. B., 3163, 3348,
 3519
 Frank, J. A., 331q, 2240
 Frank, Z. R., 307, 1227,
 3534
 Franklin, J. F., 260
 Fraser, L. R., 1575b
 Frátilă, E., 771
 Frauenstein, K., 2895, 3358,
 3757
 Fraval, A., 413
 Frear, D. E. H., 349
 Frecha, J. H., 2803

Frederiksen, R. A., 140,
 3251, 3254, 3262
 Freeman, G. H., 152
 Freeman, T. E., 121, 3352
 Frei, E., 1291
 Freigoun, S., 3052
 Freitag, J. H., 2010n, 2024,
 2268
 Freitas, A. P. Do C. E.,
 1327, 2420
 French, D. W., 1165, 3571
 French, E. R., 2735, 2972,
 2973
 French, J. V., 1373
 Frenhani, A. A., 1043
 Fresa, R., 2086
 Frey, K. J., 1260o, 2028d
 Frezzi, M., 1228
 Frič, F., 2415
 Friend, J., 2601
 Frinking, H. D., 763, 1655,
 3298c
 Fritz, A., 1665
 Fritzsche, R., 2523h
 Fröhlich, G., 3575
 Fröhlich, H., 2282e
 Frosheiser, F. I., 185
 Frossard, P., 523, 1740
 Frost, C., 635a
 Frowd, J. A., 3066, 35551
 Fruit, F., 1300
 Fry, P. R., 1308, 2918, 2919,
 3702
 Fuchs, E., 3201
 Fuchs, W. H., 1195, 1516,
 2230, 2415
 Fudge, T. G., 2184
 Fudl-Allah, A. E.-S. A. A.,
 475
 Fuentes, F. D., 3223
 Fuentes-Fuentes, S., 623
 Fujii, R. K., 1997
 Fujisawa, I., 1204
 Fujita, S., 1484
 Fukushi, T., 2010m
 Fukutomi, M., 141, 1647,
 2715
 Fuller, W. H., 3286
 Fulton, J. P., 2195
 Fulton, N. D., 2875
 Fulton, R. W., 2195, 2522 l,
 2523e, 2525, 3151
 Funder, S., 1255
 Funk, A., 868
 Furtado, I., 484
 Furtado, J. S., 3683
 Furuki, I., 1636
 Furusawa, I., 843
 Futrell, M. C., 126, 328, 458,
 3246, 3251, 3784
 Fuzatto, M. G., 2869

Gaard, G., 2377
 Gáborjányi, R., 1475, 2373
 Gabriel, W., 2591
 Gabrowska, T. I., 1136
 Gafurova, R., 157
 Gaggini, J. B., 2093, 3491
 Gagne, R., 223
 Gagnon, C., 3363
 Gainor, C., 10
 Galante, E., 1562

Galbraith, J. C., 1955
 Galindo, J., 3451
 Gallegly, M. E., 1247i
 Gallet, M., 837, 839
 Galletta, G. J., 1093
 Gal'tseva, G. G., 3764
 Galust'yan, G. G., 653
 Gálvez E., G. E., 805, 1018, 2471, 2809, 2851, 3259
 Galzy, R., 222
 Gambogi, P., 1553
 Gámez, R., 1349
 Gams, W., 1957, 3656
 Gancheva, I., 3605
 Gandhi, S. M., 1597
 Gandy, D. G., 909h
 Garber, E. D., 204
 García, A. E., 906
 García, J., 3033
 Gardan, L., 3390
 Gardner, M. W., 3088
 Gardner, W. R., 3658
 Gardner, W. S., 2050
 Garg, S. K., 3135
 Garibaldi, A., 1569, 3040
 Garnsey, S. M., 330c, d
 Garrard, L. A., 121
 Garraway, M. O., 3652
 Garrett, C. M. E., 2299
 Garrett, M. K., 1924
 Gaskill, J. O., 1510
 Gáspár, I., 2969
 Gates, L. F., 1358, 3244
 Gaut, I. P. C., 284
 Gavalas, N. A., 2120
 Gavrilova, E. A., 1658
 Gay, J. D., 298, 1900, 3604
 Gay, J. L., 106
 Gayed, S. K., 1139, 2993, 2994
 Geigy, J. R., 2308s
 Geissinger, C., 5f
 Gel'tser, F. Yu., 23
 Gemawat, P. D., 817
 Genève, R., 848, 3478
 Gentile, I. A., 254, 3003
 Gentles, J. C., 1539c
 Geoghegan, M. J., 2308e, 3593c
 Georgala, D. L., 1887a
 Georgieva, M., 3188
 Georgopoulos, S. G., 19, 331h, 1899
 Gerasimova, T. P., 239
 Gerdemann, J. W., 26
 Gerechter-Amitai, Z. K., 3200
 Gerhardson, B., 3752
 Gerini, V., 2314
 Gerlach, W., 1048
 Gerola, F. M., 404, 808, 1641, 3716, 3724
 Gershon, H., 1552
 Geshele, É. É., 2812, 2820
 Ghaffar, A., 308, 487, 769
 Ghazali, S. W., 755
 Ghemawat, M. S., 728, 1604
 Ghena, N., 2594
 Gheorghia de, V., 990
 Gheorghiu, E., 2524, 2535
 Ghosh, A. K., 3409
 Ghurde, V. R., 2824
 Giai, I., 254, 3003
 Gianinazzi, S., 834, 835
 Giannopolitis, C. N., 3749
 Giannotti, J., 852, 1315, 3178, 3480
 Giatpong, P., 140
 Gibbs, A. J., 978, 3150a, b, 3151
 Gibbs, J. N., 1378
 Gibson, E. J., 1500
 Gibson, I. A. S., 1169, 1493, 1806, 2190d, 2286l, m, 3493
 Giessmann, H.-J., 2559
 Gilbert, R. G., 53, 958, 1066, 1067
 Gilbertson, R. L., 1161, 1295
 Gill, C. C., 118
 Gill, D. L., 3084b
 Gill, L. M., 2613
 Gill, R. H., 249
 Gillaspie, A. G., 3464
 Gillespie, T., 1816
 Gillis, E., 2727r
 Gilman, G. A., 1586
 Gilmer, R. M., 3416
 Gilpatrick, J. D., 199, 218, 1701
 Girard, D. H., 356
 Giri, L., 3559
 Gitman, L. S., 166
 Gjaerum, H. B., 1400, 3184
 Gladkov, A. T., 822
 Gladysheva, N. M., 1459
 Glaeser, G., 1234
 Głębczyński, E., 2610
 Glickman, M., 241
 Glinka, E. V., 826
 Glynn, A. N., 1995
 Goel, L. B., 745
 Goeldner, H., 1745
 Goenaga, A., 3083a
 Goethals, M., 3326
 Gofféte, J., 3298a
 Goffre, P., 513
 Goheen, A. C., 1260m
 Golato, C., 88, 96, 1439, 1468, 2314, 2581
 Gold, A. H., 1970, 2770
 Gol'din, M. I., 80, 1837
 Goldmann, A., 640
 Golenia, A., 1537i
 Golovko, A. I., 1180
 Golubev, A. A., 1201
 Gol'yshin, N. M., 1696, 2643
 Gonçalves, J. R. C., 228
 González, D., 3067
 Gonzalez, M., 492
 González Ávila, M., 1172
 González Barrios, M. A. J., 1172
 Good, H. M., 859
 Goode, M. J., 2184, 3057
 Gooding, G. V., 2088, 2171, 2629, 3475
 Goodman, R. N., 206, 1142, 2179, 2537, 3377, 3582, 3583
 Goold, R. A., 1857, 3557g
 Gopal, N. H., 1380
 Gopalkrishna, N., 2949, 2950
 Gopimony, R., 2723
 Gorbik, L. T., 1923
 Gorbunova, N. I., 1063
 Gordon, D. T., 51
 Gordon, M. P., 3710

Gorenz, A. M., 721b
 Gorina, E. I., 1032
 Gorlenko, M. V., 2801, 2802
 Gorlenko, S. V., 500, 1668
 Görlitz, H., 2534
 Gornostai, V. I., 2096
 Gorodilova, L. M., 1615
 Gorshin, S. N., 586
 Goth, R. W., 1247j
 Goto, K., 3264
 Goto, T., 1220, 1820
 Gottlieb, D., 370, 3621
 Gough, F. J., 1588
 Goujon, M., 1275
 Gould, C. J., 1282, 2505, 3343
 Gourley, C. O., 2908
 Gourret, J. P., 497, 502, 764, 765
 Govier, D. A., 3077e
 Govindaswamy, C. V., 2720
 Govindu, H. C., 17, 110, 2714
 Gracia, O., 318
 Graham, J. H., 503
 Graham, M. K., 2287
 Graham, S. O., 2675
 Grainger, J., 1870, 1871b
 Grama, D. P., 1454
 Gramain, E., 3318
 Gramlich, J. V., 2308r
 Granada Ch., G. A., 3281
 Granados, R. R., 739, 980, 1247a, 1567, 2010o, s, 3083b, 3239, 3240, 3727
 Grand, L. F., 25, 2746
 Granett, A. L., 2989
 Granger, C. A., 3396
 Graniti, A., 371, 1744, 2399
 Grasham, J. L., 1168, 2208
 Grasso, S., 2947, 2951, 2998, 3175, 3335
 Grasso, V., 2402, 2407, 2573
 Gray, L. E., 26
 Gray, W. D., 1294
 Greathead, A. S., 2218
 Greaves, M. P., 2357
 Grebenyuk, M. V., 1959, 2777
 Greber, R. S., 622
 Gredit, M., 1269, 3599
 Green, G. J., 120, 325, 1326, 2406, 3189
 Green, R. J., 1289, 2325
 Greenaway, S., 3462, 3468
 Greenaway, W., 2449
 Greene, G. L., 1283
 Greenleaf, W. H., 256
 Greenwald, R. W., 2308f
 Greenwood, A. D., 3522
 Gregory, G. F., 392
 Grela, T., 1062, 1537e
 Gremmen, J., 1802, 3492
 Grenete, J., 861, 862
 Gressnerová, M., 2008a
 Grewe, F., 1901
 Gridi-Papp, I. L., 2869
 Griebel, G. E., 53, 958, 1067
 Grierson, W., 330k, 3284
 Griffee, P. J., 1513
 Griffin, D. M., 49, 368, 381, 1260e
 Griffin, G. J., 609
 Griffith, R. L., 352, 2308a

Griffiths, D. A., 13
 Griffiths, E., 1378, 2863, 3290
 Grimm, G. R., 330d
 Grison, C., 600, 712, 3511
 Groenewoud, H. Van, 878
 Grogan, P. W., 1011
 Grogan, R. G., 924, 1564, 1889
 Grosclaude, C., 2669
 Grosclaude, M. C., 3391
 Grose, R. J., 2190i
 Grosu, R., 990
 Groth, J. V., 2878
 Grove, S. N., 3143
 Grover, R. K., 1133, 1488, 1549, 1597, 2276
 Grujičić, G., 1396
 Grümm, G., 853, 3001, 3317
 Grýsenko, H. V., 2054
 Grzelińska, A., 2186
 Gudauskas, R. T., 3250
 Gujarati, S., 365, 684, 2247
 Gulidova, L. A., 3215
 Gulkanyan, V. O., 997
 Gull, K., 3105
 Gumarova, Kh. F., 1063
 Gummpf, D. J., 3760
 Gunasekaran, M., 3651
 Gunnell, J., 340
 Günther, E., 853, 3001
 Gupta, B. M., 3527
 Gupta, J. H., 3236
 Gupta, J. P., 2759
 Gupta, O. S. D., 3559
 Gupta, R. B. L., 2217
 Gupta, S. C., 3559
 Gupta, U. C., 3043
 Gur'yanova, A. I., 3302
 Gusakova, T. N., 810
 Guseinov, A. D., 250
 Guseinov, É. S., 1083, 2104
 Guseva, K. A., 103
 Guseva, N. N., 2326
 Guthrie, J. W., 2234
 Gutstein, Y., 1828
 Gutter, Y., 3283
 Guttman, S.-M., 1284, 2768
 Guyot, L., 2342
 Guzhova, N. V., 3309
 Guzmán, V. R., 3592
 Gvozdyak, R. I., 2996
 György, B., 2523d
 Haag, H. P., 2872
 Haas, J. H., 2703
 Habashi, M., 2860
 Hadley, G., 934
 Hadwiger, L. A., 2320
 Haeske, E., 3798
 Hagedorn, D. J., 5n, 293, 297, 331i, 602, 1202, 1210, 1211, 1215, 2696, 2761, 3525
 Haglund, W. A., 895
 Hajny, G. J., 3113
 Hakkaart, F. A., 774, 1538r, t
 Halfon-Meiri, A., 3059
 Halins'ka, M. S., 1859
 Halisky, P. M., 1061
 Hall, C. B., 1152
 Hall, D. H., 2218, 3796
 Hall, H. R., 3565c
 Hall, R., 1976, 1994
 Hall, S. W., 1276
 Halliwell, R. S., 219, 529
 Halloin, J. M., 2761
 Halmos, S., 1643, 2135
 Hamann, U., 3694
 Hamdorf, G., 2522f
 Hamilton, J. M., 1700
 Hamilton, R. I., 2285g
 Hammett, K. R. W., 421, 1685
 Hampton, R. E., 247
 Hampton, R. O., 5b, m, 1306, 3047
 Hamrán, M., 2315
 Hanchey, P., 1623
 Hancock, J. G., 1860, 1925, 2775
 Hanna, A. D., 148
 Hansbrough, J. R., 2190b
 Hansen, E., 1547
 Hansen, G. M., 260
 Hansen, H. P., 3689
 Hansen, L. R., 1691
 Hanso, M., 1808
 Hanson, A. A., 337
 Hanson, E. W., 1060
 Hanson, J. A., 3483
 Hanušová, M., 512
 Harada, Y., 202
 Harding, P. R., 3282
 Härdtl, H., 698
 Harjung, M. K., 1374
 Harkness, R. W., 2510
 Harmaja, H., 2001
 Harner, F. M., 360
 Harpaz, I., 399, 3437
 Harper, A. M., 124
 Harper, C. W., 3374
 Harper, F. R., 124, 336
 Harrar, J. G., 333
 Harris, D. C., 3564a
 Harris, H. B., 2057
 Harris, J. L., 2663
 Harris, R. F., 3658
 Harris, S., 902
 Harrison, B. D., 978, 3151, 3154, 3169, 3557d, e, 3701
 Harrison, J. A. C., 1463
 Harrison, J. S., 1539
 Harrison, M. D., 2604
 Harrow, K. M., 902
 Hartill, W. F. T., 2178
 Hartstirn, W., 776
 Hartz, P., 2282j, 2426
 Harvey, A. E., 1168, 2208, 2675
 Harvey, J. M., 2119
 Harvey, R., 338
 Hasan, A., 2167
 Hascoet, M., 3599
 Hashem, M., 2487
 Hashioka, Y., 2062, 3265, 3269
 Hashizume, B., 1635
 Hasija, S. K., 944, 1954
 Haskins, R. H., 32, 387, 2767
 Hastie, A. C., 3603
 Hata, K., 1498
 Hatmanu, M., 2454
 Hautala, E., 1754a
 Haverkate, F., 18

Havlová, M., 825
 Haware, M. P., 1464, 2753
 Hawke, M. F., 2829
 Hawken, R. H., 177
 Hawkins, J. H., 2997
 Hawksworth, F. G., 3024
 Hawthorne, B. T., 3647
 Hawthorne, D. C., 1539
 Hay, E. M., 393
 Hayashi, S., 1245
 Hayes, A. J., 2189h
 Hayes, J. D., 2431, 3230
 Hayes, W. A., 375
 Hayman, D. S., 1273, 1382, 2748, 3077a
 Hayward, A. C., 2625
 Hayward, F. W., 3301, 3284
 Haywood, V. C., 3555o
 Heagle, A. S., 119, 2447, 2837, 3231
 Heale, J. B., 1278
 Hearon, S., 3565f
 Heath, M. C., 294
 Hebert, T. T., 2228
 Heck, W. W., 1812
 Hecker, R. J., 1510
 Heeres, J., 3796
 Hegde, R. K., 17, 110, 1577
 Heide, A., 1318, 3447, 3457
 Heidler, G., 2817
 Heimburger, C. C., 2207
 Hein, A., 1231
 Heitefuss, R., 1207, 3769
 Helmstetter, C. E., 1887i
 Henderson, D. M., 688, 2339
 Henderson, G. S., 1911
 Hendrix, F. F., 2027c, 2334, 3354, 3389
 Hendrix, J. W., 1284, 2768, 3201, 3202, 3203
 Henis, Y., 390
 Henningsson, B., 2686
 Henry, D. G., 2243
 Henson, L., 181
 Herbas, A. R., 2942
 Heringa, R. J., 1200
 Herlihy, M., 3450
 Hermansen, J. E., 449
 Hernandez, H. C., 2155
 Herold, F., 2990
 Herrera, S., 2246
 Herrera, M. L. M., 2843
 Herțea, Gh., 2550
 Hervé, J. J., 513
 Hervey, A., 955
 Heshamul Haque, T. I., 3
 Heskett, M. G., 3576
 Hess, S. L., 2320
 Hess, W. M., 1230, 1997
 Hesselteine, C. W., 332e
 Heta, H., 1331
 Hetzer, E., 3508o
 Hewetson, F. N., 2539
 Hewett, P. D., 1322, 3775
 Hewitt, W. B., 1987, 3414
 Heybroek, H. M., 3014
 Heydecker, W., 295
 Hibben, C. R., 671, 1159, 3083h
 Hibino, H., 2914
 Hickey, H. R., 3750
 Hickey, K. D., 2309
 Hidalgo-Salvaterra, O., 3473

Hide, G. A., 1122, 2308a
 Hierholzer, D., 2308u
 Higgins, V. J., 1065, 2102, 2521
 Hignett, R. C., 1699
 Hildebrand, D. C., 1084, 1260, 2117, 2543, 2736, 3092, 3312, 3526
 Hilgeman, R. H., 3286
 Hill, A. V., 558b
 Hill, J. C., 373
 Hillis, W. E., 1912
 Hills, F. J., 1189, 3510
 Hill-Van Der Meulen, G. W., 3167
 Hilton, A. C., 2664
 Himelick, E. B., 855
 Himmelweit, F., 83, 3726
 Hine, R. B., 2029, 2776
 Hingorani, M. K., 1651
 Hindst, M., 2559
 Hinz, B., 2226, 3699
 Hirai, T., 1134, 2379, 2795, 3159, 3698
 Hirano, K., 567
 Hirata, K., 2344
 Hiratsuka, Y., 578, 2209, 3499
 Hiroe, I., 3648
 Hirschhorn, E., 331j
 Hirst, J. M., 1122, 2308a, 3077c
 Hirth, L., 703, 709, 710
 Hiruki, C., 324i, 3148, 3442
 Hirumi, H., 5c, 980
 Hirye, C. D., 2418
 Hislop, E. C., 1898, 23081
 Hitchcock, S. E., 331e
 Hiura, U., 1331
 Ho, B. W. C., 1534
 Ho, H. H., 1221, 1848
 Hoarau, M., 917a
 Hoare, R. C., 1489
 Hock, W. K., 2665
 Hockenhull, D. J. D., 2293
 Hodges, C. F., 1054, 1405, 2516, 3356, 3357
 Hodges, C. S., 1260j, 2674, 3027
 Hodgkiss, I. J., 338, 1287
 Hodgson, W. A., 324q, 665
 Hoes, J. A., 324e
 Hoff, R. J., 2676
 Hoffman, G. M., 1996
 Hofmann, K., 2552
 Hogg, B. M., 551
 Hoitink, H. A. J., 3347
 Holcomb, G. E., 2149
 Holdeman, Q. L., 3022
 Holgate, M. E., 351, 1898, 3374
 Holland, A. H., 3540
 Holliday, P., 1975, 2338, 2617, 3131
 Holliday, R., 331k
 Hollings, M., 415, 909h, j, k, o, q, r, s, 2881, 2884, 3151
 Hollings, N., 1266
 Holmes, C., 1578
 Holmes, F. W., 3012
 Holmes, J., 2907
 Holstad, N., 1754a
 Holstad, N. M., 2977
 Holtmann, H., 1138
 Holtz, S., 2575, 2577
 Honda, Y., 2634
 Hong, C.-Y., 1240
 Hooker, A. L., 1627
 Hooker, W. J., 1754b, e, 2606
 Hopkins, D. L., 247
 Hopp, A. D., 3411
 Hoppe, W., 1537b, c, f
 Hora, T. S., 2771
 Hori, M., 1371, 1644
 Horino, O., 3268
 Horn, N. L., 2929
 Horn, P., 706
 Hornby, D., 1333, 2307m, 3077b, m
 Horne, F. R., 2307a
 Horne, R. W., 3311, 1798
 Horsfall, J. G., 5a, 1250, 1260
 Horváth, J., 1476, 2215, 2589, 3041, 3703
 Horváth, L., 3417
 Howard, F. L., 331m, 828, 2672
 Howard, H. W., 3556a
 Howden, J. C. W., 2892
 Howell, C. R., 2866
 Howell, M. J., 2307h
 Howland, A. K., 1169, 22861
 Hoyle, J. C., 230
 Hruschka, H. W., 2555
 Hsieh, S.-P.-Y., 1016, 1023
 Hsieh, T. C., 2692
 Hsu, S. C., 374
 Huang, C. C., 1097
 Huang, H. C., 324f
 Huang, J.-S., 3582, 3583
 Hubbeling, N., 1538w, 2727w
 Hubbell, D. H., 3091
 Hubbes, M., 262, 271, 1171
 Huber, D. M., 2027e
 Huber, F. M., 370
 Hubert, M.-F., 1286
 Huchet, T.-M., 3330
 Huffman, P. J., 275
 Hughes, C. G., 1128
 Hughes, J. E., 3687
 Hughes, P. A., 3336
 Hulea, A., 1321, 2348, 2454, 2732
 Hull, R., 1798, 3077p, 3149f, 3361
 Hulme, M. A., 1816
 Hulpoi, A., 2697, 2702
 Humphreys, T. E., 121
 Humphreys-Jones, D. R., 1764
 Humphries, E. C., 1612
 Hunnius, W., 2592
 Hunter, J. A., 1418
 Hunter, J. E., 3410
 Hurd, E. A., 1326
 Hurlimann, J. H., 2879, 2886
 Husaini, S. W. H., 2981
 Huntinga, H., 893, 1538n
 Huyberts, N., 1538w
 Hylin, J. W., 2760
 Hylin, V., 2760
 Hyodo, H., 1246, 2281
 Hyppel, A., 3025, 3026

Ibarbia, E. A., 1780
 Ibragimov, G. R., 250
 Ibrahim-Nesbat, F., 2991
 Ichinohe, M., 3321
 Ide, G. J., 1273
 Ie, T. S., 866
 Igész, O., 1536
 Iida, W., 179
 Izuka, H., 971
 Izuka, N., 179
 Ikediugwu, F. E. O., 2679
 Ikegami, H., 3265
 Il'icheva, A. A., 239
 Ilyasdinov, Sh. N., 2225
 Inagaki, H., 1137
 Ingram, D. S., 1821
 Ingram, J., 2307r, 2926
 Inman, R. E., 1880
 Inogamov, R. U., 2520
 Inouye, T., 1512
 Iqbal, S. H., 1526
 Isaac, I., 1463
 Isaeva, E. V., 3392
 Isaeva, G. Ya., 2967
 Isayeva, O. V., 2921
 Ishag, F., 305
 Ishaque, M., 164, 2391
 Ishida, N., 34, 1929, 1930, 1931
 Ishigami, K., 1376
 Ishihara, T., 2010k
 Ishii, M., 1365, 1638
 Ishikura, N., 1912
 Isin, M. M., 1080
 Israel, H. W., 3474
 Item, H., 2324
 Ito, K., 1404, 2200
 Itoh, T., 2379
 Ivory, M. H., 2286j, m, n
 Iwaki, M., 1145, 3065
 Izadpanah, K., 476, 900

Jabbar Miah, M. A., 3430
 Jackson, E. B., 2221
 Jackson, H., 3730a
 Jackson, L. W. R., 1556
 Jackson, N., 2098
 Jackson, R. S., 324g
 Jacob, M., 3340, 3349
 Jacobs, L., 634, 2892
 Jacobson, L., 1917, 2765
 Jacques-Felix, H., 3574
 Jadot, R., 1507
 Jaffer, A. A., 3292
 Jafri, A., 598
 Jager, K., 994
 Jagielski, A., 1120, 1148
 Jaidi, A., 3413
 Jain, A. C., 109, 1323
 Jain, J. P., 1671, 1750, 1855, 1906, 3503
 Jaiswal, S. P., 2168
 Jamalainen, E. A., 1673
 James, G. L., 549
 Jamsharia, S. L., 3425
 Jamil, M., 3561
 Janardhan, A., 2714
 Janardhan, P. S., 2616
 Janáček, V., 1805
 Janińska, A., 1826
 Jaquani, A., 2902b
 Javed, Z. V. R., 2330
 Jaworski, C. A., 1261, 1490

Jayaraman, K., 3108
 Jean, J.-H., 1010, 2051
 Jenkins, A. E., 93
 Jenkins, J. E. E., 177, 1608, 3730c
 Jenkyn, J. F., 30771
 Jennings, J. P., 798
 Jennings, P. H., 132
 Jennings, P. R., 1260p
 Jensen, A., 2898
 Jensen, D. D., 2010x, 2797, 3344
 Jensen, J. J., 2957
 Jensen, K. F., 3117
 Jensen, M. H., 1779
 Jensen, S. G., 1338
 Jermoljev, E., 536, 701, 2793
 Jeske, A., 3598
 Jewell, F. F., 872
 Jeyarajan, R., 2948
 Jeziorska, Z., 1140, 2992
 Jiménez-Martínez, A., 3622
 Jiménez S., E., 2807
 Joffe, A. Z., 1856, 3533, 3534
 Johanson, R., 2691
 Johnson, D. C., 2847
 Johnson, F., 2336
 Johnson, G. T., 373, 1020
 Johnson, H. W., 504
 Johnson, L. B., 2958
 Johnson, R., 3556a
 Johnson, R. M., 2789
 Johnston, H. W., 2042
 Johnstone, G. R., 193
 Johnstone, K. I., 18871
 Joksimović, S., 1590
 Joly, P., 1299, 2790
 Jones, A., 320
 Jones, A. T., 2431, 3557g
 Jones, B. L., 1687, 3790
 Jones, D., 682
 Jones, D. G., 111, 2425, 2441, 2823, 3208, 3730b
 Jones, E. E., 3364
 Jones, J. K., 30
 Jones, J. P., 108, 330f, 941, 1849, 3485
 Jones, R. M., 2899
 Jones, T., 2190d
 Jones, T. M., 1260g
 Jooste, W. J., 1576
 Jordan, V. W. L., 351, 2307s
 Jordović, M., 2523j, 2546, 2549
 Jørgensen, H. A., 2903
 Jørgensen, J., 1340
 Jørgenson, J., 914
 Joshi, L. K., 1472
 Joshi, L. M., 745, 1607, 3193, 3759
 Joshi, M. M., 610, 2763, 3785
 Joshi, R. D., 547
 Joshi, R. S., 3620
 Jothianandan, D., 1019
 Joubert, J. J., 2736
 Jovanović, M., 3359
 Junejo, A. K., 730
 Juo, P.-S., 1759
 Juretić, N., 78, 2637
 Kaars Sijpesteijn, A., 2308k
 Kable, P. F., 2922
 Kachalova, Z. P., 3207
 Kado, C. I., 3576
 Kadýrov, Ch. Sh., 653
 Kafi, A., 1910, 2515
 Kaftanova, A. S., 3160
 Kagan, F., 1537n
 Kagans'ka, M. B., 2996
 Kahan, R. S., 149
 Kahn, R. P., 1864, 3565f
 Kai, F., 474
 Kailidis, D. S., 575
 Kaiser, W. J., 1519, 2704
 Kakkar, R. K., 943
 Kalamees, K., 1542b
 Kalashnikov, K. Ya., 1543, 3755
 Kalichava, A. G., 2326
 Kalnins, K., 372
 Kal'vish, T. K., 346
 Kalyanasundaram, R., 331v
 Kalymbetov, B. K., 59
 Kam, M. De, 3492
 Kamal, 3715
 Kamal, M., 631, 730, 754, 1823, 2060, 2721
 Kamat, M. N., 2733
 Kamei, T., 1820
 Kamel, M., 3182b
 Kamerbeek, G. A., 1390
 Kamersfar, R. K. V. S. R., 2063
 Kamilova, M. Kh., 2868
 Kamoen, O., 2085, 2727x
 Kamýshko, O. P., 44
 Kanchaveli, L. A., 1356, 2642
 Kanchaveli, N. Z., 2640
 Kanevcheva, I. S., 2810, 3216
 Kao, K. N., 99
 Kapitsa, O. S., 248, 841, 2172, 2369
 Kapoor, I. J., 1933, 3008, 3407, 3487, 3637
 Kapooria, R. G., 136
 Karara, M., 2245
 Karatygin, I. V., 128
 Karstedt, P., 1182h
 Kartashova, E. R., 3309
 Kartha, K. K., 417
 Kaspers, H., 1707, 1747
 Kassanis, B., 1135, 3077c, d, 3151, 3161
 Kaštánek, Č., 1458
 Kataoka, M., 2795
 Katiyar, R. L., 724, 3770
 Kato, H., 3266
 Kato, K., 1376, 3798
 Katsuya, K., 437, 438, 1367
 Kaufman, D. D., 2772
 Kaufmann, H. H., 638
 Kaufmann, M. L., 1341
 Kaur Hardip, 1133
 Kaushik, C. D., 2650
 Kavanagh, J. A., 1712, 3501
 Kavanagh, T., 1420, 2307u, 3558b
 Kawada, A., 2740
 Kawaguchi, K., 1636
 Kawamura, T., 567
 Kazantseva, G. N., 2975
 Kazimierska, E. M., 1415
 Kazimierski, T., 1415
 Kearns, H. G. H., 1652
 Keay, M. A., 328
 Kechakmadze, L. A., 1681
 Kechek, N. A., 997
 Keeling, B. L., 504
 Keen, N. T., 1950
 Keep, E., 2927
 Kegler, H., 2522j, 2523h, m
 Keil, H. L., 5j, 207, 1247e, 1728, 3382
 Keivani, A., 2991
 Kelleher, W. J., 3104d
 Kellerman, C., 2075
 Kelts, L. J., 3416
 Kemp, W. G., 1399
 Kempe, W., 2552
 Kempson-Jones, G. F., 2381
 Kempton, R. J., 909
 Kendrick, W. B., 70, 332d, 972, 1302
 Kenina, Sh. M., 3642
 Kenknight, G., 265
 Kennedy, B. W., 1223, 3095
 Kenneth, R., 2030, 2832
 Kenneth, R. G., 3539
 Kenten, R. H., 95b
 Keplinger, J. A., 215
 Keramidas, C., 3368
 Kerber, E. R., 3197
 Kercher, C. J., 1846
 Kerling, L. C. P., 1879
 Kern, H., 641, 2324
 Kerner-Gang, W., 2684
 Kerr, A., 244, 345, 3348
 Kerridge, P. C., 1616
 Keshavamurthy, K. V., 2470
 Keskin, B., 1195
 Kessler, K. J., 261, 2192, 2661
 Ketskhoveli, E., 2533, 2536
 Keyworth, W. G., 1557, 3555
 Khairy, E. A., 1569, 2280
 Khalil, I. H. I., 3243
 Khan, A. H., 874
 Khan, A. M., 537, 2156, 2981
 Khan, I. D., 1651
 Khan, S. A., 2060
 Khan, S. A. J., 2499
 Khan, T. N., 1007, 1620
 Khandelwal, G. L., 659, 2273, 2941, 3503, 3542, 3546
 Khanna, A. N., 1003, 1004
 Khanna, B. M., 724, 1004
 Khanna, R. N., 481
 Kharchenko, S. M., 3107
 Khare, M. N., 313, 2705, 2706
 Khatib, H., 982
 Khidyaev, Kh., 157
 Khodjibayeva, C. M., 767
 Khokhryakov, M. K., 342, 1657, 2734
 Khodoluyuk, M. S., 1583
 Khomyakov, M. T., 2112
 Khristova, E., 1209
 Khrivostova, E., 1517
 Khrumova, V., 2896
 Khurana, S. M. P., 2137, 3073
 Kichanova, I. M., 2868

INDEX OF AUTHORS

Kiel, W., 2584
 Kiely, T. B., 2074
 Kiewnick, L., 1232, 2727n
 Kikacheishvili, Z. N., 2642
 Kim, K. S., 1314, 2025
 Kim, W. K., 432
 Kimbrough, J. W., 963
 Kimmey, J. W., 276
 Kimmings, W. C., 2020
 Kincaid, R. R., 849
 King, J. E., 1229
 Kingsolver, C. H., 2004
 Kinloch, B. B., 580, 3495
 Kinman, M. L., 2249
 Király, Z., 2373
 Kirby, A. H. M., 650, 2725j
 Kirilenko, T. S., 1960, 1961
 Kirimelashvili, M. S., 2465
 Kirk, B. T., 1039
 Kirk, H., 1183
 Kirk, J., 1086
 Kirk, P. W., 71
 Kirkham, D. S., 1699
 Kirmani, M. A. S., 120
 Kirwan, J., 3473
 Kiryukhina, R. I., 2174
 Kisaleva, N. T., 1032
 Kishi, K., 3383
 Kishiyama, J., 1189
 Kisiel, M., 1015
 Kislev, N., 390
 Kiso, A., 751
 Kiss, E., 35080
 Kitajima, E. W., 2648, 2698, 3177
 Kitani, K., 751, 782
 Kitazawa, K., 2159
 Kitsos, G. T., 3749
 Kiyoysawa, S., 1367, 1368
 Kleczkowski, A., 3077e
 Kleiner, B. D., 3020
 Kleiner, E. M., 160
 Kleinheimpel, H., 2523f, 2556
 Klement, Z., 642, 1414
 Klicza, K., 1120, 1148
 Klimmer, O. R., 1897
 Kline, D. M., 69, 182
 Klingstrom, A., 3035
 Klinkowski, M., 2522
 Klíř, O., 594, 2588, 2889
 Klisiewicz, J. M., 2151
 Klochko, M. D., 1546
 Kloke, A., 913
 Klotz, L. J., 1024, 1649, 3282, 3800
 Kluge, E., 2313
 Klusák, H., 3213, 3768
 Klyucheva, M. V., 2084
 Knee, M., 2601
 Knesek, J., 598
 Knight, B. C., 3373
 Knight, C. A., 3473
 Knighten, J. L., 274
 Knights, B. A., 2769
 Knösel, D., 3654
 Knott, D. R., 99
 Ko, W.-H., 1966
 Kobakhidze, D. M., 1424
 Kobayashi, N., 2715
 Kobayashi, T., 3031, 3140
 Koblet, W., 532
 Koch, E. J., 1150
 Koch, J., 589
 Koch, W. J., 1885
 Kochman, J., 2782
 Kochman, J. K., 1752
 Kodyakov, T. E., 2111
 Koen, T. J., 2857
 Koenig, R., 699, 977, 2282h, 3693
 Koenig, R. F., 469
 Koenigs, J. W., 1174
 Kohistani, M. R., 295
 Köhler, E., 2363
 Köhler, S., 2310
 Kohmoto, K., 3648
 Kojima, M., 3443
 Kojima, S., 2099
 Kolbe, W., 1705, 1747
 Kolbezen, M. J., 2739, 3661
 Kolesnichenko, G. S., 2841
 Kollár, V., 2041
 Kollmann, R., 935
 Koltin, Y., 2832
 Komarova, É. P., 1180
 Kommedahl, T., 1357
 Komuro, Y., 1145, 3065, 3321
 Kondo, H., 2200
 Konev, Yu. E., 44
 Kongsvik, J. R., 3706
 Konopska, L., 291
 Konovalova, N. E., 2811, 2816
 Konstantinova, A. F., 519, 3394
 Koons, C., 135, 3247
 Koons, C. E., 3083c
 Kopan, V. P., 2109
 Korant, B. D., 3586
 Korešho, E. G., 155
 Koretskii, P. M., 2238
 Kormelink, J. R., 360
 Koroleva, I. B., 187
 Korol'ova, I. B., 1695
 Kosheleva, A. B., 1113
 Koshimizu, Y., 3266
 Koshkelova, E. N., 2341, 3366
 Kostic, B., 1590, 1598
 Kosuge, T., 29, 1260h
 Kotasthane, S. R., 3313
 Kotasthane, W. V., 2083
 Kotetsov, P., 1082
 Kothandaraman, R., 753
 Kotik-Królicka, Z., 1831, 1832, 1833
 Kotova, V. V., 894
 Koula, V., 2974, 3449
 Kousalya, G., 2712
 Kovačević, D., 3508a
 Kovachevski, I., 2008f
 Kováčiková, E., 3516
 Koval', E. Z., 347, 1923
 Koval'chuk, N. I., 884
 Kovalenko, O. G., 1453, 1756, 2173
 Kozaka, T., 1369
 Kozar, F., 2436, 2437
 Kozar, F. E., 407, 408
 Kozar, F. Yu., 2017
 Kozlova, V. I., 2859
 Kozumplik, V., 2375
 Kradel, J., 2307e, 2308g, p., 2727c, m
 Kraft, J., 598

Kraft, J. M., 895
 Králik, O., 1760
 Kramer, C. L., 35
 Kranz, J., 973, 3568
 Krapivina, I. G., 586
 Krass, C. J., 3528
 Krassilnikov, N. A., 767
 Kravtsova, T. I., 2046
 Krebill, R. G., 1179
 Kreger-Van Rij, N. J. W., 1539a
 Kreisel, H., 685
 Krijthe, J. M., 1538
 Krikun, J., 307
 Krishna, R., 1773
 Krishnamurthy, C. S., 2712, 2720
 Kristensen, H. R., 1416, 1429, 1518, 2924
 Kristof, P., 2570
 Krivchenko, V. I., 2818
 Kříž, J., 2576
 Kröber, H., 1316, 2282d
 Kroeker, G., 1503
 Królikowski, Z., 1352
 Kropis, É. P., 1089, 1726
 Krotov, A. S., 2479
 Kruger, D. J., 2075
 Krüger, W., 3783
 Krupinsky, J. M., 444
 Krutova, N. P., 1509
 Krzymańska, J., 1537f
 Ksajík, D., 2383
 Kuan, C.-H., 1501
 Kubacka, M., 288
 Kubicka, H., 253, 1486
 Kubitschek, H. E., 1887q
 Kublitskaya, M. A., 1746
 Kuć, J., 1212, 1260i, 2531, 2906
 Kučera, J., 1455
 Kucherenko, L. V., 3094
 Kuchmi, N. P., 3186
 Kudela, V., 186
 Kudo, T., 202
 Kuhlman, E. G., 279, 1175, 2204
 Kuhn, C. W., 1225, 3056
 Kühn, R., 928
 Kühnel, W., 2310, 2331
 Kuijt, J., 687
 Kulibava, Yu. F., 2122
 Kulik, M. M., 2789, 3633
 Kulikov, A. I., 1583, 1600
 Kulikova, G. N., 727, 1329, 2421
 Kulikov'ska, M. D., 2996
 Kulkarni, H. Y., 1686, 2286h
 Kulkarni, N. B., 65, 163, 471
 Kumagai, T., 364
 Kumar, S., 3181a
 Kumar, S. M., 2705
 Kummerow, J., 3033
 Kummet, J., 77, 976, 3217, 3325
 Kundert, J., 2569
 Kuniyasu, K., 782
 Kunkel, R., 1754a, 2977
 Kunoh, H., 734, 1929, 1931
 Kunovski, Zh., 2257
 Kuo, M.-S., 1629, 1630, 2450
 Kuo, T.-T., 550, 1023, 2064
 Kurakhtanova, T. I., 3606

Kurbanov, I. I., 1036
 Kurbansakhatov, A., 1978
 Kurkdjian, A., 898
 Kurkela, T., 1606, 2202
 Kurzinger, W., 3436
 Kus, M., 2213
 Kushwaha, U. S., 1473
 Kuzicheva, V. V., 889
 Kuz'michev, A. A., 3207
 Kuz'mina, G. N., 238
 Kuznetsova, T. T., 1883
 Kvitsko, K. V., 3766
 Kyle, A. M., 3555f, g

Laane, M. M., 2005
 Laasimer, L., 1542
 Labanok, A. G., 36
 Laborde, L. J., 2946
 Lachance, R.-O., 2285f, k
 Lachover, D., 1967
 Lacoste, L., 1822
 Lacote, J. P., 497
 Lacy, M. L., 613, 3064
 Ladeishchikova, E. I., 281
 Laflèche, D., 331c, 2858
 Lafon, R., 1524
 Lagière, R., 763, 1655
 Lahoz, R., 39, 1941
 Lai, M.-T., 2844
 Lai, P. Y., 1222, 1850
 Laine, L., 875
 Laine, L. K., 2190g
 Laird, E. F., 1374
 Lal, B., 667
 Lamb, R. C., 1700
 Lambat, A. K., 243, 2848, 3055
 Lamberti, F., 2011
 Lambeth, V. N., 1780
 Lambremont, E. N., 1039
 Lamey, H. A., 2010p
 Lammerink, J., 2693
 Lancashire, J. A., 1688
 Lanetski, V. P., 2326
 Lange, H., 3587
 Lange, W. H., 1189
 Lange-De La Camp, M., 735, 3773
 Langenegger, W., 2857
 Lanier, L., 1170, 1171, 1811
 Lankford, C. E., 1256
 Lanzani, G. A., 1562
 Lanzani, M., 1562
 Lapierre, H., 400, 413, 533, 704, 1304
 Lapis, D. B., 3120
 Larina, É. I., 1566
 Larsen, E. C., 2904
 Larson, E. vH., 1788
 Larson, R. I., 2825
 Last, F. T., 375, 393, 909c, h, 1489, 1539d, 2308b, 3087
 Lastra, R., 1237
 Latch, G. C. M., 1688
 Laterrot, H., 3480
 Latham, A. J., 3018, 3375
 La Touche, C. J., 1539c
 Lauber, H. P., 532
 Lauber, J., 3593g
 Lauber, J. J., 2308f
 Laudi, G., 3168
 Lauffer, M. A., 3149

Laundon, G. F., 3183
 Lauritis, J. A., 3177
 Laux, W., 920, 3567
 Lavallée, E., 2285a
 Laville, E., 220
 Laviola, C., 1247i
 Lavits'ka, Z. H., 60
 Lawrence, J. S., 2938
 Lawson, R. H., 1247c, 2092, 3565f
 Lazär, I., 1091
 Leach, C. M., 6
 Leach, S. S., 1117
 Leath, K. T., 1351
 Leben, C., 1851, 3526
 Lebeurier, G., 709, 710, 842
 Leclant, F., 497
 Ledingham, R. J., 3206
 Lee, B. H. K., 3124
 Lee, C.-S., 548, 1130, 1131, 3465
 Lee, F. N., 3084e
 Lee, S. H., 3793
 Lee, S.-L., 1939
 Leelavathy, K. M., 48
 Leff, J., 331n
 Legg, J. T., 95b, c, e, 1265
 Le Grice, D. S., 3412
 Leh, H.-O., 2255
 Lehmann, C. O., 1582
 Lehmann, H., 3773
 Lehmann, W., 2496
 Lehoczky, J., 1444, 3417
 Leibundgut, H., 3017
 Leinonen, S., 1606
 Lekomtseva, S. N., 2033
 Lele, V. C., 1717, 3055
 Lemeni, V., 775, 1321, 1487, 2653
 Lemeshchenko, G. P., 3107
 Lenhart, K., 1185
 Lennard, J. H., 235b
 Le Normand, M., 502
 Lenz, J. V., 2091
 Leonard, K. J., 2444, 2445, 2446
 Leone, I. A., 1061, 1578
 Leong, P. C., 2289, 3360
 Leont'eva, Yu. A., 2596
 Lepidi, A. A., 1908
 Lepist, A. Ya., 201
 Léránth, J., 2340
 Lerch, B., 2282e
 Leseman, D., 2498
 Leskelä, A., 3754
 Lešková, O., 292, 416, 2897
 Lesnaw, J. A., 2638
 Le Tan, T., 3518
 Le Tourneau, D., 27, 3644
 Letova, M. F., 342
 Leu, L. S., 2623
 Levi, M. P., 2682e
 Levitin, M. M., 162
 Levushkina, S. V., 653
 Levy, J. F., 1817, 2682c
 Levy, S., 2274
 Lewellen, R. T., 888, 1506
 Lewis, F. H., 1247h, 2359
 Lewis, J. A., 1972
 Lewis, P. N., 338
 Lhoste, B., 838
 Lhoste, J., 3602
 Li, C.-C., 2064
 Li, C. Y., 260c

Li, H.-W., 550
 Liang, C. H., 1100
 Liese, W., 953
 Lim, G., 167, 714, 1684, 1992, 2805, 3123
 Lim, W. L., 13
 Limberk, J., 1760, 3481
 Lin, B.-C., 2064
 Lin, S.-C., 548, 3465
 Lin, Y., 1070
 Lin, Y.-N., 1046
 Lincoln, R. G., 2328
 Lindberg, G. D., 1932
 Lindenfelser, L. A., 20
 Linderman, R. G., 1066, 2027d
 Lindner, R. C., 2106
 Lindpere, A., 2193
 Lindsey, D. L., 2253
 Lindsey, M. F., 3248
 Lindsten, K., 3752
 Ling, K. C., 20101, 2385, 3793
 Linn, M. B., 2358
 Linnasalmi, A., 3709
 Linnemann, G., 3611
 Lipińska, J., 2585
 Lippincott, B. B., 926, 1890
 Lippincott, J. A., 926, 1890
 Lippold, P., 2851
 Lipsits, D. V., 829, 2158
 Lisina-Kulik, E. S., 43
 Lisker, N., 3534
 Lisle, R. M., 1029
 Lister, R. M., 1075, 3166
 Little, R., 440
 Little, R. C., 1715
 Little, T., 2218
 Littlefield, L. J., 490, 1386
 Littrell, R. H., 1900, 2398, 2885, 3129
 Litvinova, G. V., 787
 Liu, L. J., 919b
 Livchak, T. O., 810
 Llanos M. C., 1440
 Lloyd, E. H., 1595, 3202
 Lobzhanidze, Kh., 2536
 Locci, R., 3655, 3678, 3684, 3685, 3794
 Lockhart, B. E. L., 2709, 3157
 Lockhart, C. L., 324b, 2932
 Lockwood, J. L., 55, 374, 1965, 1966
 Loebenstein, G., 2069, 2274, 3158, 3799
 Loegering, W. Q., 1881
 Loesch, P. J., 2463
 Loeschcke, V., 2282e
 Logan, C., 3455
 Loginova, V. G., 933
 Lojek, J., 324s
 Lojek, J. S., 1477
 Loman, A. A., 324w, 1809, 3494
 Lomas, J., 3448
 Lombard, P. B., 1721
 Lombardo, G., 3724
 Loneragan, J. F., 3365
 Long, C., 806
 Long, P. G., 1737, 2136, 3402
 Longley, R. P., 1072
 Lopatecki, L. E., 1081

López, G. M., 2809
 López-Abella, D., 1394, 3155
 López Rosa, J. H., 919e
 Lorenzetti, F., 508
 Lorincz, D., 3568
 Lortie, M., 2659
 Loughnane, J. B., 2608
 Louvet, J., 1822
 Lovelidge, B., 511
 Lovi, N. K., 95c
 Lovisolo, O., 1626, 2013
 Lovrekovich, H., 1142, 2179, 3377
 Lovrekovich, L., 1142, 2179, 3377
 Lowe, D. P., 686, 856
 Lowe, R., 3557c
 Lowe, S. K., 208
 Lownsberry, B. F., 208
 Lowry, R. J., 2039
 Lozano, J. C., 3580, 3581
 Lozano T., J. C., 805
 Lu, F. C., 3594b
 Lu, K. C., 260a, c
 Luca, P., 2551
 Lucas, L. T., 1889
 Lucas, R. L., 378, 951
 Luedemann, G., 3104c
 Luepschen, N. S., 1727
 Luig, N. H., 995, 3194
 Luisetti, J., 3390
 Luisoni, E., 702, 1626
 Luke, H. H., 121, 1348
 Luke, W. J., 488, 1663
 Lukens, R. J., 5a, 2123
 Lukezic, F. L., 376b, 503, 1069, 2159
 Lumsden, R. D., 28, 3515
 Lundström, H., 2686
 Lusasi, I. M., 3292
 Lušin, V., 1573, 3508h
 Lust, S., 2308u, 2727e
 Luttrell, E. S., 2787
 Lyda, S. D., 3311, 3651
 Lyon, A. J. E., 951
 Lyon, J.-P., 3298b
 Lyons, A. R., 498, 1053
 Lyons, T., 3483
 Lýsenko, G. S., 3764
 Lysczc, S., 851
 Lyubetskaya, O. S., 1034, 2873
 Maan, S. S., 1328
 Maas, J. L., 2089, 2931
 Maas, P. W. T., 713, 3564a
 Maat, D. Z., 1538m, 2794, 3369
 Macauley, B. J., 49, 381
 McCain, A. H., 2087
 McCarter, S. M., 1261, 1490, 2398, 3129
 MacCarthy, H. R., 1754d, 2010j, 2157
 McCornack, A. A., 3301
 McCoy, N. L., 1402
 McCracken, E. U., 1328
 McCracken, F. I., 864, 3011
 McCrum, R. C., 324u
 McCune, D. C., 3573, 3750
 McDade, J. J., 1887e
 McDonald, D., 328, 1523
 MacDonald, W. L., 3014
 McDonnell, P. F., 2114
 Maćek, J., 2509
 Maceljski, M., 3508g, h
 Macer, R. C. F., 2307i
 Macer Wright, D., 1426
 McEvoy, I. J., 2936
 McFadden, L. A., 3083d
 Macfarlane, I., 3077f
 McFarlane, J. S., 888, 1506
 McFerran, J., 2184
 McGechan, J. K., 1094
 McGuire, J. U., 3740
 Machardy, W. E., 331m
 McHenry, J., 1295
 Maciejowska-Pokacka, Z., 1214
 McIntosh, A. H., 234, 1761
 McIntosh, D. L., 514, 788
 McIntosh, R. A., 3194
 Mackay, D. C., 3043
 McKay, J., 2586, 2598
 McKee, R. K., 2726
 McKeen, W. E., 2289, 3360, 3677
 McKenzie, A. R., 389
 Mackenzie, D. R., 125, 2451
 McKenzie, D. W., 786
 Mackinnon, J. P., 3240
 McLaren, A. D., 3473
 Maclean, D. J., 1260e
 McLean, D. M., 3070
 McLeod, D. E., 1794
 Macleod, D. M., 2282i
 McMillan, R. T., 330g
 Macnab, A. A., 2932
 McNabb, H. S., 3014
 MacNaughtan, M. C., 3557a
 Macneill, B. H., 324t, 1260f, 1781
 McOnie, K. C., 2075
 Macovei, A., 1430, 2522z
 McQuire, A. J., 2682b
 McQuitty, J. B., 2430
 Macris, B., 19
 Madan, M., 3645
 Madej, T., 3616, 3617
 Madumarov, T., 66
 Magie, R. O., 172, 330q
 Maginnes, E. A., 2888
 Maglakelidze, A. I., 3482
 Magnani, G., 269, 270, 278
 Magnus, H. A., 425
 Mahadevan, A., 753, 921, 3308
 Mahakul, S. K., 815
 Mahanty, H. K., 2177
 Maheshwari, R., 2039
 Maillet, P.-L., 599, 764, 765
 Mainstone, B. J., 2165b
 Majerník, O., 2439
 Majewski, T., 2782
 Majorana, G., 910g, 3280
 Makarenko, E. E., 3046
 Makeš, M., 3593 i
 Mäkinen, Y., 62
 Makino, M., 3269
 Maksimova, R. A., 1271, 1558, 2327, 3115
 Malaguti B., G., 1350, 2049
 Malca, I., 1950
 Malcolmson, J. F., 1460, 1461, 2603
 Malençon, G., 2342
 Malenin, I., 1446, 2146
 Malik, K. A., 2791
 Malikov, N. V., 1173
 Mallette, M. F., 1887o
 Maloy, O. C., 2579, 2583
 Mamedov, A. Kh., 657
 Mamluk, O. F., 2223
 Mamula, Đ., 2214
 Manasse, R., 1263
 Mandelbrot, A., 3083a
 Mandloï, S. C., 313
 Mandre, M., 2095
 Mandryk, M., 251
 Manigault, P., 898, 1248c
 Mankarios, A. T., 379
 Mankau, R., 8
 Mann, D. R., 1624
 Manners, J. G., 440
 Manning, W. J., 168, 241, 2006, 3336, 3345
 Mănoiu, I., 1527
 Manser, P. D., 3734
 Mansour, I. M., 3243
 Mansour, I. S., 1633
 Mantle, P. G., 1276
 Mănuță, L., 1001
 Manucheri, A., 1520
 Mapother, H. R., 1652
 Marais, A., 910f
 Maromorosch, K., 5c, 980, 2010r, s, 2385, 3239, 3727
 Marani, F., 495
 Marathe, T. S., 3285
 Marchenkova, L. A., 3761
 Marchisio, V. F., 3607
 Marchou, G., 852
 Marchoux, G., 401, 617, 1315, 3480
 Marco, S., 3704
 Marcondes, A. M. S., 1372
 Marcus, O., 1121
 Marechal, G., 3593a
 Marénaud, C., 189, 1698, 2522n, 3384, 3385
 Marénaud, G., 3368
 Marić, A., 1014, 3508a, d
 Marin A., J. C., 3408
 Markiewicz-Jodko, M., 2180
 Marković, S., 3434
 Marković, Ž., 1014
 Marks, G. C., 2190i
 Marlatt, R. B., 2503, 2504, 2510
 Marr, G. S., 3412
 Marras, F., 145, 146, 147, 289, 290
 Marrou, J., 619, 620, 705, 910i, 3470
 Marsden, M. A., 3496
 Marsh, P. B., 1383, 3301
 Marshall, C., 331f, 3486
 Martelli, G. P., 316, 405, 406, 564, 565, 910h, 1444, 2014, 2508, 2522t
 Martens, J. W., 1326, 2406, 3189
 Martin, C., 834, 836, 837, 838, 3707
 Martin, F. G., 330k
 Martin, G., 820
 Martin, G. W., 3145
 Martin, H., 15
 Martin, J. T., 3079a
 Martin, M. W., 1146, 1783
 Martin, P., 3141

Martin, R., 2165f
 Martinović, M., 1362, 1396, 1432
 Marx, D. H., 266, 2319, 2746, 3112
 Mas, F., 1927
 Masih, B., 1973, 3662
 Maslova, R. A., 588
 Mason, D. L., 2900
 Massenot, M., 2342
 Masseller, D., 2282c
 Massie, L. B., 2097
 Masternak, A., 2105
 Mateescu, N., 212
 Mateles, R. I., 2293
 Mathews, J., 3695
 Mathre, D. E., 683, 3102
 Mathur, B. L., 818
 Mathur, R. L., 818, 1973, 3535, 3641, 3662
 Mathur, R. S., 697, 732, 1344, 1345, 2279, 3135
 Mathys, G., 3594a
 Matić, I., 3508e, p
 Matile, P., 1539e
 Matiussi, R. E., 482
 Matolcsy, G., 1550, 1551, 2315, 2316
 Matsubara, Y., 778
 Matsuda, A., 1297
 Matsuda, M. H., 3469
 Matsui, C., 1204, 1820, 2379, 2634
 Matsumoto, I., 286, 592
 Matsumoto, T., 832, 1130, 1131
 Matta, A., 254, 1569, 3040
 Matthews, F. D., 174, 773
 Matthews, R. E. F., 1667, 3151
 Matthews, S., 352
 Matuo, T., 229
 Matveeva, E. S., 3309
 Matveeva, E. V., 304
 Maude, R. B., 930, 989, 2308d, 2713, 3555d, e, f, g
 Maury, Y., 233, 400
 Maw, G. A., 909a
 Maxie, E. C., 2752
 Maxwell, J. D., 1628
 Mayama, S., 142
 Mayo, M. A., 3557d
 Mayo, M. J., 389
 Mazzucchi, U., 315, 1680, 2219, 2267, 2542
 Mederick, F. M., 3241
 Mee, H., 1042
 Megahed, E.-S., 1087
 Mégie, C., 1665
 Mehrotra, B. S., 63, 326
 Mehrotra, R. S., 3679
 Mehta, P. R., 326
 Mehta, S. C., 2448
 Mehta, Y. R., 2846, 2849
 Meignoz, R., 836, 837, 838
 Meijer, G., 2308v
 Mejstřík, V., 662, 2750, 3111
 Mekhtieva, N. A., 348
 Melching, J. S., 1247b, 2004, 3688
 Mellinger, H. C., 1754b
 Mello, O. F. De, 2071
 Melnick, J. L., 3150
 Mena, A. J., 860
 Menon, M. R., 2262
 Men'shikova, N. V., 3238
 Menzies, J. D., 53, 958
 Menzinger, W., 959, 2332
 Meossi, E., 96
 Mercer, P., 3522
 Mercer-Quarshie, H., 3255
 Mercier, S., 910c
 Meredith, D. S., 524, 2562, 2937, 2938; p. 539
 Merezhko, T. O., 1296
 Merrett, M. J., 2364
 Merrill, W., 376b, 577
 Mesri, 1520
 Messiaen, C.-M., 1927, 1928
 Messiaen, M. C., 553
 Metcalfe, D. R., 114
 Metcalfe, P. B., 107
 Metlitski, L. V., 1462, 2743, 3089
 Meyer, J. A., 966, 1298
 Miah, M. S. A., 3259
 Miah, S. A., 1639, 2851
 Mian, A. L., 1471
 Michail, S. H., 566, 1569, 1784, 1791, 2280
 Michalíková, A., 3204
 Michalski, K., 3508r
 Michell, A. J., 3619
 Miciński, B., 1537g, i
 Mickovski, J., 2639
 Migliori, A., 705, 3470
 Mijušković, M., 2945
 Mikhailova, L. A., 3766
 Mikhalevich, P. K., 1180
 Mikhééva, I. I., 2018
 Mikola, P., 1914
 Mikolajewicz, T., 3778
 Mil'chenko, K. P., 2019
 Mildenhall, J. P., 3538
 Milholland, R. D., 1093, 2088, 2128, 2129, 3395
 Milićić, D., 2361, 2372, 2523m, 3718
 Mil'ko, A. A., 969
 Millar, C. S., 870
 Millar, R. L., 1065, 2102, 2521
 Miller, C. R., 846
 Miller, J. R., 3565c
 Miller, L. P., 1248e
 Miller, P. M., 2108, 3477
 Miller, P. R., 2397
 Miller, S. B., 1401, 2497, 3324
 Miller, V. L., 2505, 3343
 Millikan, D. F., 5k, 1624, 2105, 2110, 2522w
 Mills, J. T., 452, 3224, 3225
 Milne, K. S., 2268
 Milne, L., 369
 Milne, R. G., 3171
 Milo, G. E., 398, 2635
 Milošević, B., 1572
 Minhas, A. S., 2040
 Mink, G. I., 598, 1226, 2022, 3714
 Minko, G., 2190i
 Minoiu, N., 2523c, 2550
 Minotti, P. L., 621
 Mirakhmedov, S. M., 157
 Mircetich, S. M., 5j, 1247f, 1290
 Mirchink, T. G., 767, 1963
 Miribel, B., 3298b
 Mirić, M., 2457
 Mirkova, E., 1412
 Mirocha, C. J., 73, 1205, 1206, 2229
 Mirpulatova, N. S., 2868
 Mirzabekyan, R. O., 236
 Misaghi, I., 924
 Misato, T., 2744
 Misawa, T., 1565, 2378
 Mishra, A., 1361, 2468
 Mishra, A. B., 468, 2418, 2429, 2708
 Mishra, A. K., 2007
 Mishra, A. N., 2939
 Mishra, B., 1337, 1634, 2894
 Mishra, R. P., 109, 1323, 2706, 3211
 Mishra, R. R., 3559, 3715
 Mišić, P. D., 1077
 Mišiga, J., 3593b
 Mišiga, S., 3593b
 Mislivec, P. B., 2842
 Misra, A. K., 1741
 Misra, A. P., 1337, 1634, 1646, 1689, 2424, 2894
 Misra, D. P., 2455
 Misra, R., 3559
 Misra, R. R., 365
 Misra, S. R., 3461
 Mitchell, A. D., 1956
 Mitchell, D. T., 2329
 Mitchell, J., 1858
 Mitchell, J. E., 293, 602, 1202, 2323, 2696, 3680
 Mitchell, J. F., 208
 Mitchell, N. L., 3677
 Mitchell, S., 2038
 Mitidieri, A., 3551
 Mitrofanova, I. I., 3238
 Mitsuhashi, J., 2010w
 Miyakawa, T., 478
 Miyazawa, Y., 229
 Mizukami, T., 570, 1260c
 Mladenov, M., 1387
 Mocquot, B., 331c
 Moeller, C. F., 3147
 Moghal, S. M., 631, 1823
 Moglia, C., 1419
 Mohajer-Shojaei, M. H., 507
 Mohanty, A. K., 749, 3058
 Mohanty, N. N., 749, 815, 3058
 Mokrá, V., 2008b
 Moldoveanu, O., 355
 Moller, W. J., 198, 211, 799
 Molnár, J., 1702, 1703
 Molot, P.-M., 1631, 3245
 Moltesen, P., 1182d
 Moncrief, J. B., 3354
 Moniz, L., 1108
 Moniz, L. A., 812
 Monroe, R. L., 1864
 Monsion, M., 3330
 Montalbini, P., 1208
 Montant, C., 673
 Montgomerie, I. G., 2307v, 3557a
 Mooij, J. C., 541
 Moor, H., 1539e
 Moore, B. J., 960, 3084f, h
 Moore, F. J., 2308h
 Moore, J. D., 1087

Moore, L. D., 1775, 2644
 Moore, M. B., 119, 2837, 3231
 Moraes, V. H. F., 2956
 Mordvinkina, A. I., 2443
 More, B. B., 163
 Morea, I., 212
 Moreau, J.-P., 2930
 Moreau, M., 1674, 2500
 Moreira, C. S., 756
 Morel, G., 640
 Morelet, M., 3500
 Moreno, R., 1394, 1410, 1836
 Morgan, N. G., 1652, 3079b
 Morgan, W., 1608
 Morgat, F., 515
 Morinaka, T., 1363
 Morochkovs'ký, S. F., 60, 1544
 Morquer, R., 1285, 1286
 Morré, D. J., 3143
 Morris, L. J., 1276
 Morrison, D. J., 879
 Morrison, R. H., 1165
 Morschel, J. R., 2287
 Morschats'ký, A. A., 2044
 Mortarino, C. F., 3663
 Mortimer, R. K., 1539g
 Mortimore, C. G., 1358, 3244
 Moruzi, C., 355
 Morvan, G., 2522r
 Mosca, A. M. L., 3663
 Moseman, J. G., 114
 Moses, G. J., 816
 Moskovets', S. M., 1452, 2016
 Moskovets, S. N., 1115
 Moskovets', V. S., 1961
 Mosolova, A. V., 2558
 Mosse, B., 1273, 3077a
 Mostafa, A. K., 1791
 Mostowfipoor, P., 1167, 1530
 Motillon, J., 3602
 Motoi, E., 2524
 Motta, J. J., 1303
 Moubasher, A. H., 2337
 Mouchacca, J., 2790
 Moustafa, A. F., 2337
 Moustafa, F. A., 2295, 3577, 3578
 Mowat, W. P., 3557f
 Mozumder, B. K. G., 3630
 Mráz, F., 2822
 Mshvidobadze, M., 2553
 Msina, A., 2522k
 Mueller, W. C., 2134
 Mühle, E., 2895, 3757
 Mukerjee, N., 3319
 Mukerji, B., 335
 Mukhamedzhanov, M. V., 156
 Mukherji, S., 3060
 Mukherji, S. K., 2495
 Mukhopadhyay, A. N., 891, 1106, 1827
 Mulder, D., 190
 Mulinge, S. K., 1347, 2835, 2864
 Müller, H., 2523n
 Müller, H. J., 725
 Müller, H. W. K., 1734
 Muller, P. J., 2727k, t
 Müller, W., 912
 Müller-Kögler, E., 2282i, 2304, 3591
 Mulvany, J. G., 1887g
 Mundo, G., 2573
 Mundy, E. J., 1122
 Munga, F. M., 1806, 2286, 1, n
 Munjal, R. L., 326, 2821
 Munnecke, D. E., 960, 3661
 Munro, J., 665
 Munteanu, I., 740, 991, 1005, 1342
 Munthe, T., 424, 1857
 Munz, K., 1237
 Murai, T., 1484
 Murakami, J., 1366
 Murakishi, H. N., 1311
 Muramatsu, Y., 1636
 Murant, A. F., 414, 1857, 2523k, 3151, 3557e, g, i
 Murasato, S., 2099
 Murav'eva, M. F., 1219
 Murav'eva, T. I., 1559
 Murayama, D., 3443
 Muromtsev, G. S., 3606
 Murphy, H. C., 2028d
 Murray, J. S., 870
 Muse, R. R., 3353
 Musil, J., 3593f, i
 Musil, M., 292, 416, 2897
 Mussell, H. W., 2325
 Mustafa, F. H., 3731b
 Muszyńska, K., 1330
 Mutto, S., 1733
 Mwathi, G. K., 2286a
 Myers, A., 74
 Mygind, H., 544
 Mzhavanadze, A. V., 2507
 Nadernejad, 1397
 Naeff-Roth, S., 2324
 Nagai, H., 2719
 Nagai, M., 790
 Nagaich, B. B., 823, 3712
 Nagel, C. M., 127
 Nagle, M. E., 46
 Nagler, M., 1669
 Nag Raj, T. R., 972
 Naguib, M. I., 3649
 Nagy, F., 2513
 Nagy, G., 2969
 Nair, N. G., 38, 368, 1867
 Nakagaki, Y., 3159
 Nakajima, M., 3119
 Nakanishi, T., 1272, 1277, 2742
 Nakata, S., 806
 Nambiar, K. K. N., 604, 1224, 2023, 2242
 Namekata, T., 581, 1375, 2071, 3005
 Nandi, P., 1279
 Napleкова, N. N., 366
 Naqvi, N. Z., 458
 Naqvi, S. H. Z., 3310
 Narain, U., 326, 3559
 Narasimhan, K. S., 747
 Narasimhan, M. J., 3590
 Narasimhan, R., 367, 1942, 3114
 Narasimhan, V., 535, 2475
 Narayanaswami, R., 3256
 Narayanaswamy, P., 3690
 Nariani, T. K., 417, 3272
 Narita, T., 3445
 Narkiewicz-Jodko, M., 2180
 Nash, G. T., 3048
 Našinec, J., 188
 Nasu, S., 2010t, 3260
 Nath, R. P., 3055
 Natsume, T., 782
 Natsvlishvili, A. A., 2462
 Nault, L. R., 5h, 2034
 Naumann, K., 2577, 3544
 Navaratnam, S. J., 2287
 Navatel, J. C., 617, 910i
 Nayar, R., 1799
 Nayar, R. M., 1798
 Naylor, A. G., 423
 Neafitava, V. K., 491
 Neal, J. L., 260a, 2825
 Nečas, J., 2813
 Nechaeva, A. V., 134
 Nechiporenko, N. S., 1114
 Neely, D., 651, 2196, 2197
 Neergaard, P., 326, 3080
 Negritu, V., 811
 Negru, A., 1527, 2354
 Negruțkii, S. F., 280
 Negulescu, F., 2814
 Neira, P. S., 2061
 Neitzel, K., 3435
 Nelson, C. E., 1213
 Nelson, D. C., 2611, 2978
 Nelson, J., 3540
 Nelson, P. E., 679, 1095, 1676, 3328
 Nelson, R. R., 69, 135, 182, 2347, 2459, 3083c, 3247
 Nema, K. C., 2475
 Nemeć, P., 655, 656
 Nemeć, S., 1096, 2131, 2934, 3084d
 Németh, J., 642
 Németh, M., 2522d, 2523d
 Nene, Y. L., 326, 1309, 1597, 3708
 Nesheim, O. N., 2358
 Neshev, G., 2265
 Nettevich, É. D., 3761
 Netzer, D., 2718, 3539
 Neuhaus, W., 2310, 3781
 Neumann, I., 2999
 Newman, B. E., 2149
 Newsam, A., 1467
 Niblett, C. L., 176, 605
 Nica, S., 212
 Nichols, C. W., 3179
 Nichols, L. P., 1421
 Nicholson, T. H., 936
 Nicolás, G., 3653
 Nicolls, J. M., 1907
 Nielson, L. W., 2972, 2973
 Niemann, E., 988, 1167, 1242
 Nieminen, M., 3754
 Niemyski, K., 291
 Nienhaus, F., 1259, 2395
 Nikitina, M. A., 80, 562
 Nikolić, B., 1059
 Nilsson, B., 1398
 Nilsson, H. E., 1585
 Nirwan, R. S., 3351
 Nishi, Y., 2010aa
 Nishihara, N., 505, 1105

INDEX OF AUTHORS

Nishimura, S., 1245
 Nishizawa, R., 1891
 Nishnianidze, N., 2536
 Nita, L., 990
 Nitany, F. E., 819, 2143, 3182a
 Noble, M., 3747
 Nøddgaard, E., 1547
 Noguchi, T., 556, 2987
 Nøhr Rasmussen, A., 1547
 Noiro-Timothée, C., 836
 Noll, A., 2282b
 Nolla, J. A. B., 919a
 Nome H., F., 2645, 2647
 Nord, F. F., 1498
 Norman, P. A., 2481, 2856
 Norman, S. M., 760
 Noronha, A. Do R., 1099
 Norris, J. R., 1887
 Novacky, A., 2840
 Novaes-Ledieu, M., 3622
 Novak, J., 2008g
 Novák, J. B., 2522h
 Nováková, J., 3593d
 Nover, I., 112, 1582
 Novotel'nova, N. S., 1984
 Nowacka, H., 1537j
 Nowacka, W., 1537c
 Nuorteva, M., 875
 Nuque, F. L., 1639
 Nusbau, C. J., 2027a
 Nutman, F. J., 152, 483, 1027, 1653, 1654, 2286k, 3287, 3288, 3289
 Nutman, P. S., 3077a
 Nyborg, M., 3190
 Nyland, G., 208, 1260n
 Nylander, P., 1182a

Obata, T., 3342
 Oblisami, G., 3108
 Obrero, F. P., 3543
 O'Brien, M. J., 331p
 O'Callaghan, T. F., 2307u
 Ockise, F. J., 3292
 Oczosiowa, A., 559
 Oda, Y., 364
 Odening, L. A., 2374
 Odintsova, O. V., 789
 Oei-Dharma, H. P., 1319
 Oertel, C., 2882
 Oganesyan, S. G., 997
 Ogawa, J. M., 1100, 1101, 3403, 3483
 Ohashi, Y., 1484
 Ohkawa, M., 2916
 Ohler, J. G., 231
 Ohmori, K., 3119
 Ohta, Y., 3547
 Ojrzyńska, M., 291
 Okada, K., 556, 2987
 Okaisabor, E. K., 721b, 1050
 O'Keefe, R. B., 2976, 3456
 Oku, H., 1272, 1277, 2742
 Okuda, J., 1245
 Okusanya, B. A. M., 721a
 Olah, A. F., 3364
 Olangiu, M., 1541
 Old, K. M., 382
 Olembó, T. W., 1801
 Oleson, W. H., 3364
 Olifson, L. E., 3642
 Olsen, C. C., 589

Olson, E. O., 2070
 Olson, R. J., 3496
 O'Malley, M., 1712
 Oman, P., 2010a
 Ømand, H. O., 1334
 Ondieki, J. J., 1035
 Ondřej, M., 717, 800, 3004
 Onesirosan, P. T., 117
 Ong, Y. H., 1992
 Oort, A. J. P., 3086
 Opoka, B., 1480
 Oranskaya, A., 2360
 Orchard, W. R., 1178
 Orcival, J., 938
 Ordish, G., 1260b
 Ordosgoity F., A., 1350, 2049
 Orekhova, V. A., 2224
 Orellana, R. G., 534, 2249
 Ó'Ríordáin, F., 2307q
 Orjuela N., J., 2435
 Orlob, G. B., 429, 1477
 Orlova, G. I., 2529
 Ormerod, P. J., 2928
 O'Rourke, C., 635d
 Orth, P. G., 2504
 Orton, P. D., 2339
 Otto, S., 2308g
 Oruzco, S. H., 1521
 Orýnbaev, S. O., 954
 Osadchii, A. P., 2841
 Osborne, L. D., 2691
 Oshima, N., 299
 Oshima-Oba, K., 1866
 Oshkhereli, M. P., 2646
 Osińska, B., 1194, 1829, 1830
 Osipova, E. A., 1459
 Osipyan, L. L., 420, 2781
 Osler, R., 1419
 Ostazeski, S. A., 1247d
 Ostrogskaya, N. A., 304
 Ostrovskii, N. I., 1943
 Otroshchenko, O. S., 3629
 Ottsuki, Y., 397
 Otta, J. D., 3393
 Otterbacher, A. G., 801
 Ou, S. H., 1260p
 Ouattara, S., 763, 1655
 Ouchi, S., 843
 Ouchi, Y., 1637
 Ovechnikova, L. N., 303
 Overman, A. J., 330s
 Owen, E. D., 3473
 Owens, L. D., 672, 958
 Owusu, G. K., 95a, d, 3519
 Oxenham, B. L., 480
 Oyabade, I. T., 721a
 Özalp, M. O., 232
 Ozeretskaya, O. L., 1462, 2743, 3089

Pacetto, M., 3335
 Paclt, J., 2124
 Padalino, O., 2402, 2423
 Padhi, N. N., 749
 Padma, M. C., 845
 Padmanabhan, S. Y., 2063, 2473, 2855
 Padmavathy, K., 3665
 Padova, R., 149
 Pady, S. M., 35
 Paetzoldt, M., 573
 Pag, H., 2860

Page, O. T., 324c, h, l, n, 1916
 Pagony, H., 873
 Paharia, K. D., 1124
 Paine, C. W. E., 3320
 Paish, C. L., 1431
 Pakhomova, I. S., 736
 Palakarcheva, M., 1482, 1776
 Palazon, I., 2923
 Palenzona, M., 3613, 3614, 3615
 Paletskaya, L. N., 1032
 Paliwal, Y. C., 2388, 3728
 Palmer, J. T., 1979
 Palmer, L. T., 1357, 1632
 Palmeter, D. H., 1719, 2107, 3083f
 Pal'mova, N. P., 1558, 2327, 3115
 Palti, J., 1260j, 3448
 Panagopoulos, C. G., 813
 Pande, A. K., 2153
 Pandotra, V. R., 3236
 Panella, A., 508
 Panić, M., 2412
 Panjan, M., 2361, 2587, 3508g
 Pant, D. C., 3559
 Panteleev, A. A., 657
 Panwar, N. S., 1244
 Papa, K. E., 965
 Papasolomontos, A. A., 911, 1876
 Papavizas, G. C., 28, 1972, 3515
 Papendick, R. I., 3666
 Papia, P. M., 3336
 Pappelis, A. J., 133, 2464, 2847
 Paquin, R., 240
 Parák, L., 802, 3593m
 Paramsothy, S., 3261
 Parashar, R. D., 1568
 Parbery, D. G., 50
 Pares, R. D., 1088
 Parish, C. L., 2106
 Parker, A. K., 877
 Parkinson, D., 47, 3520
 Parks, G. K., 3495
 Parle, J. N., 2517
 Parmasto, E., 1491, 1542a
 Parmelee, J. A., 385
 Parmentier, G., 2a, 1618
 Parmeter, J. R., 388
 Parodi, P., 2419
 Parr, J. F., 1270
 Partridge, A. D., 2662
 Partsch, G., 72, 1993
 Parveen, G., 769
 Pashkevich, A. V., 237
 Patel, A. M., 2083
 Patel, P. N., 606, 1750, 1751, 1790, 1855
 Pathak, K. D., 737
 Pathak, M. D., 2472
 Pathak, N., 2045
 Pathak, V. N., 526, 807, 1862, 1906, 2217, 2756, 2941
 Patil, B. C., 65
 Patil, B. V., 748, 1679
 Patil, D. K., 110
 Patil, L. K., 812

INDEX OF AUTHORS

Patil, P. L., 163
 Patil, R. B., 1381
 Patil-Kulkarni, B. C., 242
 Patrick, Z. A., 324a, f, g, m
 Patton, R. F., 3126
 Pauer, G. D., 1853
 Paul, H. L., 707, 3151
 Paulech, C., 1619, 1852, 2246
 Paulechová-Králiková, K., 194, 2522p
 Paulo, E., 2624
 Paulsen, A. Q., 3788
 Paulsen, Q., 5i
 Paulus, A. O., 176, 626, 2087, 2091, 3540
 Pauvert, P., 2288
 Pavgi, M. S., 1106, 1767, 2058, 3270, 3731a
 Pavlov, M. A., 1114
 Pavlyuchenko, A. A., 905
 Pawar, N. S., 2722
 Pawleska-Kozińska, K., 1834
 Pawsey, R. G., 571, 869, 2657
 Paxton, J. D., 331q, 2240
 Payak, M. M., 326, 2448
 Payne, M. G., 2222
 Peachey, J. E., 3574
 Peeples, J. L., 2773
 Pegler, D. N., 1110
 Pejčinovský, F., 2565
 Pejkić, B., 3386
 Peláez A., L. F., 2435
 Pelham, J., 2997
 Pelháte, J., 97
 Pellegrini, S., 1641
 Pelletier, G., 240, 695, 3137
 Pelletier, R. L., 324j, 2285b
 Pellizzi, E. D., 2531
 Penny, A., 3191
 Penrose, L. J., 1088, 2113
 Pepin, H. S., 1435, 1730
 Perches, S., 3451
 Peregrine, W. T. H., 1385, 1874, 3422
 Pereira, A. L. G., 2139
 Pereira, A. S., 2724
 Pereira, J. L., 929, 1379, 1905, 3291
 Peresse, M., 494, 1674, 2500
 Pérez, J. E., 919b, 2710
 Peries, O. S., 927, 2165c, 3460
 Perišić, M., 3405, 3434, 3572
 Perkins, I., 241, 3345
 Perley, A. F., 324c
 Perlman, D., 3104
 Pero, R. W., 2672
 Perombelon, M. C. M., 3557c
 Perret, P., 532, 3418
 Perry, J., 2286a
 Perry, J. J., 2690
 Perry, R. S., 3337
 Person, L. H., 1262
 Pervanskii, Yu. V., 3764
 Perwaiz, M. S., 631, 1823
 Peschel, R., 2284
 Peschka, F., 1185
 Pessanha, B. M. R., 1239
 Pessi, Y., 3754
 Péterfi, S., 991
 Petersen, D. H., 1421
 Peterson, C. A., 2699
 Peterson, J. L., 362, 1672
 Peterson, L. C., 1758, 2595
 Peterson, R. S., 867
 Petrescu, M., 1541
 Petříková, V., 729
 Petrova, A. I., 3267
 Petrova, Z. P., 1600
 Pettit, R. E., 510
 Petzold, H., 2282g
 Peyronel, B., 21
 Phadtare, S. G., 3452
 Phelps, W. R., 2677
 Phillip, M. J., 331r
 Phillips, C. A., 1738, 3400
 Phillips, D. H., 2190e
 Phillips, G. B., 1887e
 Phillips, P. G., 10
 Picci, G., 1553
 Pickard, M. A., 42
 Pidoplichko, M. M., 1960, 2777
 Pidoplichko, V. M., 1835
 Piekarczyk, K., 1119, 1537n
 Pieńazek, J., 3643
 Pieneing, L., 1341
 Pier, A. C., 1946
 Pierre, J.-G., 1822
 Pierre, R. E., 3521
 Pigati, P., 1372
 Piglionica, V., 2125, 2256
 Pilát, A., 1884
 Pilch, D. J. F., 3726
 Pilkington, S., 1278
 Pillai, A., 1060
 Pillai, P. K., 2723
 Pinckard, J. A., 1663, 2078, 3310
 Pinto De Torres, A., 1086, 3051
 Pirone, T. P., 2010i, 3174, 3634
 Pisareva, N. F., 57
 Pivar, G., 3508s
 Plaisted, R. L., 1758, 2595
 Plakhotnik, V. V., 103
 Plantrose, D. N., 3726
 Plate, H.-P., 2282d, 2501
 Platford, R. G., 3212
 Platt, R. G., 2480, 3800
 Platt, W. D., 388
 Pleše, N., 2523m, 2547
 Plessix, C. J. Du, 2165f
 Ploaie, P. G., 981
 Pochard, E., 630
 Pogorelova, L. G., 1092
 Polach, F. J., 1987
 Polák, J., 593, 594, 1825, 2889
 Polík, Z., 78
 Poletaeva, V. F., 1033
 Polkowski, W., 1833
 Pollack, F. G., 770
 Polyakov, I. M., 1583, 1600, 1601
 Polyanichko, O. F., 3302
 Pomazkov, Yu. I., 2522k, 3397
 Pomerleau, R., 262
 Pommer, E.-H., 2307e, 2308g, p, 2727c, m
 Ponchet, J., 910c
 Ponnappa, K. M., 2966
 Ponsen, M. B., 3444

Pontis, R. E., 318
 Pool, R. A. F., 1335, 1610
 Pootjes, C. F., 3586
 Pop, I., 1541, 2434, 2524
 Pop, I. V., 3776
 Pop, S., 3139
 Popkova, K. V., 2160
 Popon, J., 3390
 Popov, V. I., 2867
 Popova, I., 2538
 Popova, I. V., 3046, 3507
 Popova, K. G., 2145
 Poppe, J. A., 2727g
 Populer, C., 2a
 Porritt, S. W., 1081
 Porter, D. M., 2250
 Porter, F. M., 361
 Posnette, A. F., 633, 1074b, c, 1724, 1725, 2522a, 2725a
 Postgate, J. R., 1887r
 Postlethwaite, J. D., 2654
 Potbury, M., 123
 Potter, C., 3070
 Potter, H. S., 1754e
 Poulev, V., 1871a
 Povish, W. R., 195
 Powell, C. C., 1084, 2543
 Powell, D., 801, 1437
 Powell, J. M., 2209
 Powell, N. T., 1137
 Powell, W. M., 2027c
 Pozdena, C., 528
 Pozděna, J., 701, 2008e
 Pozhar, Z. A., 35081
 Pozsár, B. I., 3417
 Prakash, N., 2026, 3346
 Pramilla, M., 1799
 Prasad, K., 2233
 Prasad, N., 817, 3553, 3641
 Prasad, R., 659
 Prasad, S. S., 669, 3559
 Prasad, T., 501
 Prasada, R., 1591, 1592, 2273, 3503, 3542, 3546, 3767, 3789
 Prasertphon, S., 1894
 Pratella, C., 1708
 Pratt, M. J., 3472
 Preece, T. F., 987, 2597
 Preiser, F. A., 2308f
 Prendergast, A. C., 635c
 Presley, J. T., 153, 1656
 Price, D., 393, 909e, 1539d, 2512
 Price, H. E., 360
 Price, J. A., 3650
 Price, K. E., 3104b
 Price, T. V., 2891
 Price, W. C., 819
 Přehradný, S., 115
 Prieur, P., 678
 Pring, D. R., 447, 1002, 3760
 Pring, R. J., 2308n
 Pringle, R. B., 2762
 Prinzing, A., 3765
 Procházková, Z., 2008a
 Prodán, D., 2348, 2434, 2701
 Proeseler, G., 2523i
 Prota, U., 530
 Protsenko, A. E., 1236, 1391, 1670, 2008d, 2362, 3172

Protsenko, E. P., 499
 Provvidenti, R., 1217
 Prudnýk, N. Z., 1953
 Prunier, J.-P., 3390
 Prusso, D. C., 922
 Pryadko, É. I., 348
 Pucci, E., 2252
 Puckdeedindan, P., 3733
 Pugacheva, G., 2838
 Pugashetty, B. K., 161
 Pugh, G. J. F., 51
 Puhalla, J. E., 1354
 Pujol, A. R., 3274
 Pupipat, U., 2846, 2849
 Purcifull, D. E., 2212, 2248, 3165
 Purkayastha, R. P., 3060
 Purnasiri, A., 793
 Purohit, D. K., 1990, 1991, 3675
 Purtseladze, Z. S., 1718
 Pushkareva, M. N., 509
 Puttonen, R., 2031
 Putz, C., 520
 Pye, D., 2307g

Quacquarelli, A., 2522t
 Quak, F., 975, 1248g, 1538u
 Quaroni, S., 3655
 Quattara, S., 763
 Quéméner, J., 233
 Querfurth, G., 700, 2142
 Quesnel, L. B., 1887j
 Quillon, P. J., 1665
 Quiniones, S. S., 1847, 2707, 3054, 3528
 Quiot, J.-B., 1928
 Quiot, J.-M., 3178
 Qureshi, A. A., 324h, 1916

Raabé, R. D., 2879, 2886, 3088
 Raafat, A., 3536
 Radino, A. J., 2165
 Radkov, P., 1209, 1517
 Rădulescu, C., 212
 Rădulescu, E., 740, 1541, 2695, 2814
 Radzievs'kyj, G. G., 1544
 Raeber, J. G., 246, 558d, e, f, g, h, 2995
 Rafailă, C., 627, 1541
 Rágala, P., 3593j
 Raghunath, T., 226
 Ragimov, U. A., 1305, 3002
 Ragozina, I. I., 829
 Ragozzino, A., 2259, 2260, 2277, 2494, 2502, 2506, 3369
 Ragunathan, A. N., 3672
 Ragunathan, V., 86, 3061
 Rahalkar, P. W., 3756
 Rahe, J. E., 1212
 Rai, J. N., 137, 470, 1998, 2211
 Rai, R. P., 3446
 Raicu, C., 2427, 2428
 Raj, H. H., 1108
 Raj, S. A., 3308
 Rajagopalan, K., 2154
 Rajendren, R. B., 150
 Raju, D. G., 992
 Raju, P. K., 3651

Rakhimova, M., 157
 Rakisheva, Ch., 1149
 Ralph, R. K., 3149b
 Ralski, E., 1141, 3778
 Ram, A., 1717, 1944, 2090, 2848
 Ram, C., 1818, 2683
 Ram, C. B., 1716
 Ram, S., 1317
 Ramadasan, A., 901
 Ramaiah, P. K., 1380
 Ramakrishnan, C. K., 2483
 Ramakrishnan, K., 317, 604, 1224, 2023, 2242, 3672, 3690
 Ramakrishnan, L., 1951, 3523
 Ramalingam, A., 752
 Ramallo, J. C., 844, 906
 Ramallo, N. E. V. De, 2140
 Ramamurthi, C. S., 326
 Ramarao, P., 3665
 Ramaswamy, S., 2299
 Rambelli, A., 3612
 Ramirez R., O., 2435
 Ram Reddy, M. A., 2671
 Ramson, A., 2310, 2567
 Rana, G. L., 910g
 Randle, P. E., 375
 Ranganathiah, K. G., 1682, 2467
 Rangaswami, G., 161, 715, 741, 747, 1381, 1465, 1974, 3108, 3664, 3671
 Rani, S., 1683
 Ranković, M., 2549
 Rao, A. S., 3192
 Rao, A. V., 535
 Rao, K. N., 3439, 3548
 Rao, M. H., 845
 Rao, M. M., 1127
 Rao, P. G., 816
 Rao, P. M., 3074
 Rao, P. S., 2026
 Rao, V. G., 87, 845, 1112, 1983, 2780, 2853, 3741
 Rao, Y. P., 1751, 2961
 Rapilly, F., 426, 2288
 Rapoport, I. A., 1143, 1271
 Rashba, O. Ya., 1922
 Rashid, R., 3709
 Raski, D. J., 326
 Rasmussen, G. K., 2070
 Rasocha, V., 824
 Rast, A. T. B., 1538g
 Rasulev, U. U., 2046
 Ratiani, G. Sh., 2345
 Rattan, B. K., 2621
 Ratti, G., 3726
 Rattink, H., 1538g
 Raucourt, B. de, 3318
 Raut, J. D., 2949, 2950
 Rautela, G. S., 2222
 Ravenscroft, A. V., 3303
 Ravise, A., 89, 674
 Rawla, G. S., 952
 Rawlins, W. A., 3067
 Rawlinson, C. J., 2307o
 Raychadhuri, S. P., 326, 446, 537, 1772, 2026, 2156, 2262, 3055, 3193, 3257, 3272, 3719, 3759
 Rayner, R. W., 3574, 3669
 Razvyazkina, G. M., 3216

Rebenko, V. P., 2458
 Rebowska, Z., 851
 Reddy, D. B., 1126, 2287, 2390, 2392, 3732
 Reddy, D. V. R., 845, 3439, 3548
 Reddy, M. K., 753
 Reddy, M. N., 287
 Reddy, R. R. P., 1594
 Reddy, S. M., 746, 1934, 2779, 3559
 Redington, C. B., 1672
 Rees, A. R., 1782
 Rees, M. C., 2899
 Reese, E. T., 3113
 Reese, R. L., 330b
 Reeve, R. M., 1754a
 Refailă, C., 809
 Refatti, E., 1419, 2522i
 Reichle, R. E., 692
 Reichmann, M. E., 2638
 Reid, J., 64, 877, 1995
 Reiling, T. P., 895
 Reinbolt, J. A., 331s
 Reinhardt, W., 654
 Reisener, H. J., 331t, 994, 2321, 3765
 Renard, J. L., 966, 1298
 Renaud, P., 1441
 René, J., 797
 Renfro, B. L., 326, 745, 1597, 1607, 3193, 3759
 Repina, N. I., 583
 Resnik, F. C. Z. De, 2187
 Reyes, A. A., 324y
 Reyna, E. H., 485
 Reynolds, D. A., 68
 Reynolds, J. E., 2311
 Reynolds, P. E., 3117
 Reynolds, S. G., 2700
 Rezende, L. O. C., 1239
 Ribaldi, M., 508
 Ribbons, D. W., 1887
 Ribeiro, I. J. A., 2806
 Ribeiro, O., 2406
 Ribereau-Gayon, J., 3421
 Rich, A. E., 1117, 1759, 2907
 Rich, S., 94, 561
 Richard, G., 2307k
 Richard, J. L., 1946
 Richards, B. L., 3801
 Richardson, J., 3723
 Richmond, A. E., 205
 Richmond, D. V., 363, 2308n
 Richter, J., 2523f
 Rickard, M., 2307d
 Rickard, S. F., 3147
 Rieuf, P., 1449
 Riga, A., 1507
 Rilović, M., 2547
 Rishi, N., 547
 Ritonga, G., 2167
 Rivero, J. M. Del, 1047
 Rizvi, K., 1910, 2515
 Roane, C. W., 428, 3218
 Robayo V., G., 2435
 Robbins, M. L., 2652
 Robbins, W. J., 955
 Robert, C., 3390
 Robert, Y., 233
 Roberts, B. R., 863, 2665
 Roberts, D. A., 963
 Roberts, D. W., 1264, 3589

INDEX OF AUTHORS

Roberts, E. A., 3381
 Roberts, F. M., 152, 483, 1027, 1653, 1654, 2286k, 3288, 3289
 Roberts, I. M., 3154, 3169, 3557d, e, j
 Robertson, D. G., 1570
 Robertson, G. I., 572, 1800
 Robertson, J. A., 3681
 Robertson, W. M., 382, 979, 3170
 Robinson, C. F., 1539e
 Robinson, P. M., 1924
 Robison, B. M., 1768
 Robson, A. D., 3365
 Rocha Dela G., G., 1417
 Roche, R., 2571
 Rochow, W. F., 1339, 2010h, 2432
 Rodewald, W., 3575
 Rodigun, M. N., 1621
 Rodimtsev, A. I., 3629
 Rodina, K. I., 1587
 Rodriguez, A. P. J., 2803
 Rodriguez-Campos, E., 3253
 Rodriguez-Kabana, R., 52, 1918, 2773, 3130
 Røed, H., 1466
 Roelfs, A. P., 431, 2035
 Rogers, B., 2070
 Rogers, H. H., 2101
 Rogers, J. D., 260d, 332f
 Rogers, P. F., 2626, 2985
 Rogerson, J. P., 1755
 Rogozhina, É. M., 448
 Rohrbach, K. G., 1727
 Rohringer, R., 432, 3195
 Rojter, S., 1265
 Rokos, J., 188
 Roland, G., 2a, 1507
 Roll-Hansen, F., 1797, 2191
 Roll-Hansen, H., 1797
 Romaszewska-Sałata, J., 2343
 Romero, P., 1442
 Romero, S., 538
 Romig, R. W., 431, 2035, 2416, 2417
 Roncadori, R. W., 1030
 Rondománski, W., 611
 Rooy, M. De, 2727f, v
 Rösch, R., 953
 Rose, A. H., 1539
 Rose, D., 3490
 Rosenkranz, E., 5d, 459
 Rosenstock, G., 3587
 Ross, A. F., 2630, 3474
 Ross, E. W., 1810, 2319
 Ross, J. A., 2110
 Ross, J. P., 1218
 Ross, R. G., 1072, 2908
 Rossel, H. W., 3564a
 Rosser, W. R., 2307f, 2605
 Rossetti, C., 1375
 Rossetti, V., 2071
 Rossi, L. A., 2187
 Rosso, S. W., 1144
 Rotem, J., 983, 1260k, 1281, 1532, 2175, 3448
 Roth, G., 552
 Rothman, P. G., 2416
 Rougier, J., 617
 Roussaux, J., 897
 Rovira, A. D., 54
 Rowe, C., 3786
 Rowe, P. R., 1766
 Rowell, J. B., 1351, 2035
 Roy, A. K., 85a, 616
 Roy, M. K., 1597
 Roy, R. Y., 3559
 Rozendaal, A., 542
 Rozier, J.-P., 223
 Rozum, L. V., 723
 Rubin, B. A., 3309
 Rubio-Huertos, M., 301, 781, 1394, 1410, 1836
 Rudenko, L. P., 461
 Rudenko, V. I., 2996
 Ruderig, H., 1967
 Rudman, P., 1182f
 Rudnicki, R., 1436
 Rudolph, K., 1216
 Ruehle, J. L., 2674
 Ruesink, A. W., 331u
 Ruiz, Z. M., 2807
 Runov, V. I., 2792
 Ruotsalainen, L., 1673
 Ruppel, E. G., 1505, 3044
 Rush, C. M., 282
 Rush, M. C., 3299, 3700
 Russ, K., 912
 Russell, G. E., 81, 596, 3045, 3151, 3556a
 Russo, M., 405, 406, 564, 2014, 2256
 Ryan, C. L. J., 321
 Rydén, K., 1307
 Ryder, E. J., 2258
 Rýdl, R., 1502
 Rysz, M., 1141
 Saad, A. T., 2395
 Saad, S., 331i, 1210, 1211, 3525
 Saad, S. M., 2761
 Saalting, G. J., 777, 1392
 Saari, E. E., 3193, 3759
 Sabel'nikova, V. Ya., 1621
 Sabet, K. A., 305, 2466, 3243
 Saccas, A. M., 1028
 Sachchidananda, J., 3346
 Sackston, W. E., 1035, 3241, 3316, 3430
 Sadasivan, T. S., 331v, 3082a
 Sadkovskaya, L. A., 1355
 Sadoulet, M. O., 3602
 Sadov, A. P., 1092
 Sadowski, S., 1666
 Sadýkov, A. S., 3629
 Saenger, H. L., 2176
 Saffarian, A., 900
 Safran, H., 477
 Sahai, D., 1124
 Sahambi, H. S., 3077g
 Sahni, V. P., 61
 Saho, H., 277
 Sahtiyancı, S., 85b
 Saito, I., 3524
 Saito, Y., 2010v, 3260
 Sakseña, K. N., 1226, 3714
 Sakseña, R. K., 377
 Sakurai, Y., 1363, 1611, 2852
 Sakvarelidze, N. A., 2642
 Safata, B., 2343
 Salikhodzhaev, N. A., 1036
 Salikhova, B. S., 2792
 Salis, E., 170
 Salkin, I. F., 3681
 Salt, G. A., 2307j
 Salun's'ka, N. I., 129, 130
 Samborski, D. J., 455, 3189
 Sampson, M. J., 2308m
 Samra, A. S., 2466, 3243
 Sam Raj, J., 38
 Samtsévich, S. A., 36
 Samus', T. M., 192
 Sánchez, A., 3185
 Sánchez A. L., 2480
 Sánchez P., A., 3281
 Sanchez, S. D., 2155
 Sandar, N., 2611
 Sanders, H., 2131
 Sandfaer, J., 2433
 Sandhu, R. S., 3063, 3532
 Sandhu, S. S., 2621
 Sands, D. C., 2917, 3092
 Sanghi, A. K., 3194
 Sankar, G., 2616
 Sankhla, H. C., 1280, 1973, 3662
 Sansome, E., 2351
 Santaolalla, M., 1836
 Santiago, A. G., 1107, 1748
 Santilli, V., 3706
 Sanyal, A., 2745
 Sarapulkin, M. M., 2810
 Sarbhoy, A. K., 326
 Sardaryan, É. O., 885
 Sardy, G., 982
 Sargeant, K., 1887n
 Šarić, A., 2384
 Sarkar, S., 331w
 Sárospataki, G., 1444, 3417
 Saryeva, A. N., 1032
 Sasai, K., 731, 2826, 2827
 Sasaki, A., 757
 Sasaki, T., 3266
 Sastry, K. S. M., 814, 3236, 3423
 Satanimi, L., 2849
 Satchuthananthavale, V., 2163
 Sato, I., 1245
 Sato, N., 539
 Satour, M. M., 1987
 Satyanarayana, G., 2628
 Saunders, P. J. W., 2307b, 2511, 2808
 Sauret, S., 861, 862
 Savas, O. E., 3754
 Saville, D. B. O., 332g, 1525
 Savin, G. H., 809
 Savitsky, H., 1192
 Savory, J. G., 2682d, 2685
 Savov, S. G., 442
 Săvulescu, A., 689, 1248j, 2522z, 3777
 Săvulescu, O., 1669
 Sawaki, T., 1636
 Saxena, S. K., 2981
 Saxena, V. C., 2211
 Saydam, C., 2721, 3182b
 Sayem, A. Z. M., 164
 Scalla, R., 836, 837, 838, 3707
 Schaad, N. W., 2737
 Schade, C., 309, 2523g
 Schaeffenberg, B., 3097
 Scharen, A. L., 444

INDEX OF AUTHORS

Scharif, G., 91, 988, 1167, 1242
 Scharpf, R. F., 1166, 3024
 Scheffer, R. P., 331x, 1622, 1630, 2450, 2762
 Scheffer, T. C., 1182b
 Scheifele, G. L., 135, 465, 2459, 3247, 3786
 Scheld, H. W., 2690
 Schenk, P. K., 3333
 Schicke, P., 2308q
 Schieber, E., 1580, 3185
 Schiffman-Nadel, M., 331a, 3406
 Schilling, P. E., 1040
 Schilperoort, R. A., 2300
 Schiltz, P., 848, 3476, 3478
 Schimanski, H.-H., 2522x
 Schipper, A. L., 73, 1205, 1206, 2229
 Schippers, B., 3127
 Schirzadi, G., 1242
 Schlifer, M., 324a
 Schlösser, U. G., 1056, 2282j
 Schmelzer, K., 1158, 2008c, 2368, 2999, 3427, 3721
 Schmid, G., 2522o
 Schmidt, G., 2544
 Schmidt, H., 2312
 Schmidt, H. E., 2008a, 2574, 2575, 2577, 2999
 Schmidt, N. C., 2724
 Schmidt, R. M., 926
 Schmiedeknecht, M., 1068
 Schmittbennner, A. F., 51, 1851, 3347
 Schmoller, H., 1251
 Schmutterer, H., 601, 1199
 Schnathorst, W. C., 2081, 2492
 Schneider, A., 865
 Schneider, H., 2540, 2914
 Schneider, I. R., 3162
 Schneider, R., 1232, 2282d, 2501
 Schoeneweiss, D. F., 2673
 Schol-Schwarz, M. B., 3676
 Scholten, G., 1538f, h, 3338
 Scholz, F., 112
 Schönhar, S., 585
 Schooley, H. D., 324p
 Schreiber, L. R., 395, 2198, 2665, 2666
 Schroeder, W. T., 1217
 Schroth, M. N., 1084, 2736, 2917, 3092, 3312, 3526
 Schüepp, H., 1291
 Schuhmann, G., 2282a
 Schultz-Dewitz, G., 1183, 1184, 1185
 Schumann, K., 2008b, 2514, 2518
 Schuster, G., 1770, 3711
 Schuster, J. E., 2197
 Schuster, M. L., 3096
 Schwartz-Kraepelin, H., 427
 Schwemmler, W., 3178
 Schuppenhauser, M. A., 558c, f, g
 Schwer, J. F., 2308r
 Schwinn, F. J., 2308s
 Sciaroni, R. H., 2879
 Scott, D. H., 2931
 Scott, G. E., 126, 3246, 3784
 Scott, H. A., 3084f, h
 Scott, K. J., 1260e, 3381
 Scott, O. J., 3686
 Scott, P. R., 3556h
 Scurfield, G., 3619
 Scurti, J. C., 2764, 3607
 Seavey, D., 3083d
 Šebesta, J., 100, 101, 102, 729, 2839, 3232, 3233, 3762, 3763
 Secor, G. A., 1451
 Seeliger, H. P. R., 332h
 Segal, R. H., 330j
 Segura, C. B. De, 3010
 Sehgal, H. S., 1499
 Sehgal, O. P., 1010, 2051
 Seidl, D., 3774
 Seidl, V., 2522g
 Sekhon, A. S., 324k
 Sekizawa, Y., 473, 474
 Sela, B., 3158
 Sela, I., 399
 Selik, M., 1156
 Seliskar, C. E., 2680
 Selivanov, I. A., 933
 Sell, J., 880
 Semal, J., 77, 976, 3156, 3217, 3692, 3722
 Seman, É. O., 486
 Semancik, J. S., 176, 605, 2374, 2709, 3157, 3278
 Semb, L., 591, 3502, 3537
 Semeniuk, G., 2844
 Seminario, B., 2973
 Sen, A. R., 1132
 Sen, B., 2821
 Seneviratne, S. N. De S., 343, 1725
 Seow, A. L., 714
 Sequeira, A. De, 2522c
 Sequeira, L., 1766, 2735, 3580, 3581
 Serra, T., 3584
 Servazzi, O., 145, 146, 147, 289
 Seshadri, V. S., 3671
 Seshu, D. V., 2475
 Sevcenco, V., 809
 Severin, V., 1541, 2697, 2701, 2702
 Sevryukova, L. F., 750
 Seymour, C. P., 330p, 3084g
 Shaffer, W. H., 206, 2537
 Shah, S. M., 546
 Shakhnabaryan, S. T., 2032
 Shalagina, A. I., 1943
 Shalla, T. A., 2989
 Shamirkhanyan, R. T., 420
 Shaner, G. E., 1596
 Shanmugam, N., 2720
 Shanmuganathan, N., 245
 Shanmugasundaram, E. R. B., 1019
 Sharma, B. C., 758, 3272
 Sharma, B. D., 2495
 Sharma, B. L., 1472
 Sharma, D. C., 1243
 Sharma, H. C., 1514
 Sharma, K. P., 3452
 Sharma, L. C., 1280, 3535
 Sharma, M. C., 758
 Sharma, R. D., 326

Sharma, S. K., 1591, 1592, 3767
 Sharma, S. M., 468, 2429, 2708
 Sharma, V. C., 3559
 Sharon, E. M., 2660
 Sharp, E. L., 105, 1335, 1610, 2815
 Sharp, M. K., 3235
 Sharp, R. F., 45
 Sharpe, T. J., 3726
 Sharples, G. C., 3286
 Sharples, R. O., 1715
 Shatrova, V. M., 1391, 1670
 Shavliashvili, I., 2456
 Shaw, C. G., 1282
 Shaw, D. E., 2901
 Shaw, M., 98, 827, 2038, 3315, 3453
 Shchekotkova, T. V., 2811, 2816
 Shea, K. R., 1813
 Shearer, G. B., 3471
 Shelud'ko, Yu. M., 407, 2017
 Shepard, J. E., 1450, 1451
 Shepherd, R. J., 2015, 2021, 3164, 3510
 Shepherd, R. L., 2874
 Shere, S. M., 1917, 2765
 Sherengový, P. Z., 213
 Sherrod, L. L., 3424
 Sherwood, R. T., 388, 2000, 3364
 Shestopal, Z. A., 1078, 2925
 Shetty, K. S., 1465
 Shevchenko, I. S., 2841, 3220
 Shevchenko, V. N., 3508b
 Shevtsov, S. I., 1615
 Shevtsova, L. B., 1063
 Shikova, N. A., 2867
 Shibuya, F., 3540
 Shigematsu, A., 1563
 Shigemura, C., 472
 Shigo, A. L., 259, 1788, 2660
 Shikata, E., 722, 757, 832, 980, 1017, 1018, 2010r, s, 2385, 2471, 3239, 3443, 3727
 Shillingford, C. A., 2563
 Shimada, K., 1366
 Shinkai, A., 1865
 Shipton, P. J., 214
 Shipton, W. A., 386, 455
 Shiraishi, M., 1647
 Shirzadi, G., 625, 2717
 Shishiyama, J., 142
 Shishkina, A. K., 264, 2203
 Shivanandappa, N., 17
 Shklyar, B. Kh., 36
 Shklyar, M. S., 885
 Shkodenko, V. I., 129, 130, 131
 Shneider, Yu. I., 239, 829, 925
 Shpiler, L. Kh., 300
 Shrivastava, S. K., 1514, 2705
 Shrum, R. D., 3688
 Shtok, D. A., 496
 Shuja, M. A., 830
 Shukla, D. D., 1361, 2468

Shukla, U. S., 3461
 Shumilenco, E. P., 178
 Shupe, J. L., 1563
 Shuring, C. G., 930, 989,
 2308d, 3555d, e
 Sicker, W., 920, 3567
 Siddiqi, M. A., 555, 1377
 Siddiqui, M. R., 2056, 2877
 Sidenko, I. E., 2053
 Sidenko, I. O., 2103
 Siemer, S. R., 612
 Siepmann, R., 1181, 2689
 Sieveking, W. E., 1617
 Signoret, P. A., 3323, 3697
 Sijpesteijn, A. K., 2727a,
 3099
 Silbernagel, M. J., 50, 1226,
 1843
 Silberschmidt, K. M., 557
 Sill, W. H., 5i, 992, 3788
 Silva, J. A., 3469
 Silveira, A. P. Da, 1535,
 2185, 3550
 Silveira, S. G. P. Da, 3550
 Simard, T., 2285c, d, e
 Simmonds, A., 1712
 Simongulyan, N. G., 2489
 Simonova, G. A., 2819, 2820
 Simons, J. N., 2796
 Simons, M. D., 456, 2028d
 Simons, T. J., 2630
 Simpson, C. J., 2307r
 Simpson, M. E., 1383, 3301
 Sims, J. J., 1042, 1950
 Sinclair, J. B., 159, 1039,
 1040, 1041
 Sinclair, W. A., 1177
 Sinden, S. L., 2297
 Singer, R., 2778, 3142
 Singh, B., 1499, 2671
 Singh, B. B., 2940
 Singh, B. M., 1709, 3376
 Singh, B. P., 1741, 1861,
 3549, 3638
 Singh, B. R., 624
 Singh, D., 263
 Singh, D. R., 2279, 2960,
 3135
 Singh, D. S., 1767
 Singh, D. V., 724, 1003,
 1004, 1597, 2960, 3636,
 3770
 Singh, G., 326
 Singh, G. P., 942
 Singh, G. R., 1127
 Singh, K., 3461, 3467
 Singh, K. G., 144, 1364,
 3260, 3271
 Singh, K. M. P., 2455
 Singh, K. P., 3236
 Singh, M. P., 724
 Singh, N., 85a, 3181a
 Singh, P., 2448, 3032
 Singh, R., 311, 403, 779,
 1238, 2269, 2948, 2961,
 3791
 Singh, R. A., 1337, 2058,
 2424, 3270
 Singh, R. D., 1671, 3559
 Singh, R. H., 3409
 Singh, R. N., 493, 881, 2065,
 2389a, 2887, 3791
 Singh, R. P., 324q, 665,
 737, 2211, 2491, 3314
 Singh, R. S., 481, 610, 1022,
 1968
 Singh, S., 2169, 2287, 3346,
 3712
 Singh, S. B., 2960, 3636
 Singh, S. L., 3731a
 Singh, S. P., 468, 2418, 2429,
 2708
 Singh, T. B., 1646
 Singh, U. P., 1996
 Sinha, A. K., 137, 143, 470,
 1998
 Sinha, B. P., 2455
 Sinha, M. K., 2948
 Sinha, R. C., 430, 2010q,
 2387, 2388, 3728
 Sinha, S., 136
 Šíp, V., 825
 Šírůček, J., 3219
 Sisler, H. D., 1260m
 Sisto, D., 2423
 Sivak, B., 827, 3453
 Sivanesan, A., 2338
 Sivaprakasam, K., 2720
 Sivinski, H. D., 1887e
 Siwecki, R., 1492
 S'jakob, J. C., 451
 Skadow, K., 964
 Skelly, J. M., 258
 Skerman, V. B. D., 2294
 Skilling, D. D., 582, 2205
 Skotland, C. B., 2150, 2579
 Skoyen, I. O., 888, 1506
 Skrypáл', I. G., 1714, 3093
 Sleesman, J. P., 1851
 Slepyan, E. I., 3781
 Slesinski, R. S., 1605
 Slootmaker, L. A. J., 733,
 2833
 Slope, D. B., 1612
 Slovenčková, V., 726
 Slykhui, J. T., 2010e, 2413
 Smale, B. C., 207
 Smalley, E. B., 5e, 263
 Smart, R. A., 1563
 Smeeton, B. W., 246, 2995
 Smerlis, E., 858, 1496, 1497,
 2206
 Smiljaković, H., 1598, 1602,
 1603, 1613
 Smiljaković, J., 1589, 1613
 Smit, F. M., 2727b
 Smith, A. D., 124
 Smith, A. E., 2308c
 Smith, A. M., 3249
 Smith, C. B., 125, 2263,
 2451
 Smith, D. H., 2359
 Smith, D. N., 2682d
 Smith, F. F., 2010cc, 3565f
 Smith, G. G., 2291
 Smith, I. M., 2231
 Smith, J. D., 1403, 2888
 Smith, J. E., 1955
 Smith, K. M., 1144, 3149
 Smith, M. A., 433, 3095
 Smith, P. F., 3286
 Smith, P. M., 909d, g
 Smith, P. R., 1308
 Smith, R., 2289, 3360
 Smith, R. J., 3241
 Smith, R. S., 959

Smith, S., 1270
 Smith, S. H., 210, 2024,
 3565d
 Smith, W. H., 1807
 Smith, W. L., 3628
 Smith, Y. J., 3555b
 Smrž, J., 3508k
 Smýk, L. V., 3627
 Smýts'ka, M. F., 60, 1544
 Snyder, W. C., 1970, 2770
 Sobers, E. K., 330p, 3084b, g
 Soboleva, A. B., 1063
 Södergren, W., 1571
 Sohi, H. S., 326
 Sokolova, V. E., 2975
 Solangi, G. R., 754
 Solomon, J. J., 3176
 Solov'ev, V. P., 1036
 Solov'eva, A. I., 66
 Somers, E., 648
 Somers, F., 3069
 Sommer, N. F., 29, 2752
 Sommereyens, G., 2a
 Sommers, L. E., 3658
 Sonoda, R. M., 3483
 Soonthronpoot, P., 2393
 Soria V., J., 2807
 Sorokina, G. K., 2811
 Sosna, Z., 1537i
 Sotula, T. L., 2055
 Soulen, D. M., 3565d
 Sowell, G., 2057
 Spaar, D., 3436
 Spalding, D. H., 203
 Spencer, D. M., 1945
 Spierings, F., 173
 Spire, D., 533, 1304, 3441,
 3518
 Sprague, R., 1720
 Sproule, T. R. M., 183
 Sreeramulu, T., 2622
 Sridhar, A., 2477
 Sridhar, R., 3795
 Sridhar, T. S., 151
 Srinivasam, K., 2723
 Srinivasan, V. K., 2414
 Srivastava, B. I. S., 2635
 Srivastava, D. N., 326, 526,
 807, 1332, 2983
 Srivastava, K. C., 658
 Srivastava, K. M., 1773
 Srivastava, M. P., 668, 795,
 1650, 1689, 1743, 1937,
 2755, 3639
 Srivastava, O. P., 527, 1109,
 1188, 2880
 Srivastava, P. S. L., 2414
 Srivastava, S. K., 1790
 Srivastava, S. L., 3559
 Srivastava, U. S., 2953
 Srivastava, V. B., 3559
 Stace-Smith, R., 3151
 Stachyra, T., 3508f
 Stahl, W., 3034
 Stahmann, M. A., 332b,
 1841, 3122, 3149
 Stačenko, N. I., 3106
 Staley, J., 3024
 Stall, R. E., 14, 1152
 Stallknecht, G. F., 73
 Stanbridge, B., 106
 Stănescu, Z., 2695
 Stanghellini, M. E., 2775
 Staniulis, J. P., 3362

INDEX OF AUTHORS

Stáňková-Opočenská, 3068
 Stanković, A., 3508a
 Stanton, D. J., 2913
 Stanton, J. R., 1247b
 Stanton, T., 599
 Stanyulis, Yu. P., 409
 Staples, R. C., 1951, 3523
 Stapp, C., 643
 Starchenkova, M. V., 2440
 Starling, T. M., 3218
 Staron, T., 354, 400, 410, 711, 712, 2930
 Starr, G. H., 1846
 Starý, B., 1425
 Stathis, P. D., 3736
 Staunton, W. P., 3558c, d
 Stavely, J. R., 849, 1060
 Steed, J. N., 198
 Stefan, G., 3513
 Štefanac, A. Z., 3557d
 Štefanac, Z., 3169
 Stefanovich, A. I., 569
 Stegemann, H., 2282e
 Stein, W., 2282i, 3591
 Steindl, D. R. L., 1128
 Steiner, G. W., 55, 1965
 Stellmach, G., 2282l, 2566
 Stepanov, K. M., 342
 Stepanova, O. S., 1953
 Stepanova, T. V., 2326
 Stephan, B. R., 1804
 Stephan, S., 2532
 Stephen, R. C., 956
 Stessel, G. J., 828
 Steudel, W., 1196
 Stevanović, R. Ž., 3508q
 Stevens, J. M., 863
 Stevens, J. O., 5b
 Stevenson, W. R., 5n
 Stewart, D. M., 2416
 Stewart, I., 330b
 Stewart, J. K., 3071
 Stienstra, W. C., 3064
 Stiers, D. L., 2291
 Stoessl, A., 3228
 Stojanović, D., 3572
 Stokes, D. E., 330m
 Stoll, K., 794
 Stolp, H., 2282c
 Stols, A. L. N., 3167
 Stolyarova, L. A., 3388
 Stone, E., 165
 Stone, G. M., 2308c
 Stone, O. M., 415, 909h, k, q, s, 3151
 Stone, Y. N., 480
 Stonecypher, R. W., 580
 Stoner, W. N., 2380
 Story, G. E., 219, 529
 Stotzky, G., 671
 Stouffer, R. F., 1247g, 3565d
 Stoulen, D. M., 1247g
 Stouthamer, A. H., 1887s
 Stover, R. H., 521, 804, 3401
 Stoyanova, M., 1776
 Straby, A. E., 3610
 Strand, M., 3149a
 Strand, R. F., 1913
 Strandberg, J. O., 287, 330h, 1824
 Streissle, G., 1567
 Stretton, H. M., 389
 E., Strider, D. L., 1787, 2188, 2656
 Stritzky, W. V., 1706
 Strobbe, M. A., 1437
 Strukov, N. A., 255
 Stuart, M. R., 2936
 Stubbs, R. W., 1538y, 3200
 Studziński, A., 1537m
 Styer, W. E., 5h
 Su, H. J., 1100, 1101
 Subbarayudu, S., 1772
 Subballya, J., 3257
 Subhankulov, A. A., 653
 Subramanian, C. V., 332i, 1975, 2346, 3082b
 Subramanian, S., 151
 Suenaga, H., 1637
 Suetsugu, T., 778
 Sugawara, M., 3443
 Sugawara, T., 2099
 Sullia, S. B., 139
 Sulochana, C. B., 3176
 Sumner, D. R., 2028a
 Sundaram, N. V., 326, 3252
 Sundheim, L., 543, 1406, 1407
 Suryanarayana, D., 326, 1568, 1661, 1662
 Suryanarayanan, S., 331v
 Sussman, A. S., 2039
 Suta, V., 212, 517, 796
 Sutherland, J., 3292
 Sutić, D., 910j, 2275, 2361, 2545, 3385, 3386
 Sutra, G., 865
 Sutton, B. C., 1989, 2338, 3031, 3489
 Sutton, J. C., 3042, 3505
 Sutton, R. A., 2481, 2856
 Sutton, R. F., 24
 Suvorov, P. A., 2290, 3039
 Suvorova, H. S., 1704
 Suwa, T., 1220
 Suzzal'skaya, M. V., 2811
 Suzuki, H., 1370
 Suzuki, N., 2010z
 Suzuki, T., 2091
 Svensson, L., 1584
 Swaminathan, M., 2723
 Swamy, B. C. N., 1682
 Swamy, R. N., 2251
 Swarup, J., 3426
 Swenson, K. G., 2010f
 Swift, H., 3177
 Swinburne, T. R., 1710
 Sýčev, P. A., 280
 Syed, G. M., 1108
 Sykes, G., 1887c
 Sylvester, E. S., 1306, 2010g, 3723
 Syvälähti, J., 3754
 Szepessy, I., 1574
 Szirmai, J., 3072
 Szkolnik, M., 1071, 1701
 Szürke, J., 1485
 Tabei, H., 472
 Taber, W. A., 2663
 Tafradžhiški, I., 1090
 Tagami, Y., 1648
 Takahashi, H., 179
 Takahashi, Y., 429
 Takakura, S., 3445

Takakuwa, M., 1763, 3445, 3524
 Takanashi, K., 3383
 Takebe, I., 397, 2632
 Takegami, S., 731, 2826, 2827
 Takeshima, S., 1636
 Talballa, H. A., 1474
 Talboys, P. W., 1438, 3570
 Talou, B., 677
 Talukdar, M. J., 2391
 Tamada, T., 1220
 Tamm, U., 1491
 Tamm, J., 1049
 Tamura, M., 1186
 Tan, S. W., 2623
 Tanabe, K., 1245
 Tanada, Y., 1895
 Tanaka, S., 2804
 Tandon, I. N., 732, 1645, 2940
 Tandon, R. N., 667, 668, 795, 1650, 1743, 1933, 1937, 1982, 2755, 2939, 3008, 3407, 3409, 3487, 3549, 3637, 3638, 3639, 3748
 Tanguy, J., 839
 Taniguchi, T., 1310
 Tanne, E., 2143, 3182a
 Tapió, E., 3691
 Tapley, R. G., 2307t
 Tarasova, V. P., 1456
 Targamazde, M. R., 2646
 Taris, B., 718, 719, 1162, 2911
 Tarjot, M., 2404
 Tarociński, E., 1182e
 Tarrant, R. F., 260
 Tarry, J. C., 1677
 Tartier, L.-M., 2285c, d, e
 Tavlitzki, J., 677
 Taylor, B. P., 45
 Taylor, C. E., 414, 979, 2010c, 2523k, 3170
 Taylor, C. E. D., 3146
 Taylor, H. M., 3355
 Taylor, I. E. P., 1956
 Taylor, J. B., 1777
 Taylor, J. D., 3555h
 Taylor, L. D., 324v, 859
 Taylor, O. C., 2484, 3801
 Taylor, R. E., 3596
 Taylor, R. H., 1575d
 Tazelara, M. F., 1200
 Teakle, D. S., 1011, 2010b
 Teich, A. H., 2206
 Tejerina, G., 3584
 Tekauz, A., 324m
 Tempé, J., 640
 Tempel, A., 18, 647, 2727d
 Teng, W.-S., 832, 1130, 1131
 Ten Houten, J. G., 3086
 Teplyankova, Z. F., 3797
 Teranishi, D. Y., 3469
 Teranishi, J., 632
 Ter-Avanesyan, D. V., 1037
 Terui, M., 202
 Teterevnikova-Babayan, D. N., 2100
 Tewari, I., 1102, 2954
 Tewari, J. D., 1716
 Tewari, J. P., 1998, 2211
 Thakur, D. P., 2650, 3379

INDEX OF AUTHORS

Thakur, R. N., 3236, 3423
 Thakurji, 3559
 Thanassoulopoulos, C. C., 2606, 3749
 Thankamma, L., 1469
 Thaung, M. M., 2982
 Thevin, C., 3298d
 Thibodeau, P. O., 621
 Thiel, R., 2999
 Thies, W. G., 3126
 Thind, K. S., 3645
 Thiollière, J., 1422
 Thirumalachar, M. J., 326, 331p, 748, 1679, 3756
 Thomas, A., 47, 3520
 Thomas, C. A., 2151, 2152, 2580, 2959
 Thomas, C. E., 2220, 2270
 Thomas, P. E., 1146, 1783, 3512
 Thomas, P. R., 2367, 3557h
 Thomason, I. J., 2027
 Thompson, C. R., 2484, 3801
 Thompson, S. M., 3565b
 Thomsen, A., 2905
 Thomson, G. M., 554, 2619
 Thornberry, H. H., 1309, 3150c, 3708
 Thorne, J. M., 909r
 Throneberry, G. O., 1949
 Thurston, H. D., 805
 Thyr, B. D., 1786
 Tiangco, E. S., 3083e
 Tichelaar, G. M., 1538e, i
 Tiffany, L. H., 1946
 Tiits, A., 2523a, 2557
 Tikhonenko, T. I., 3149d
 Tikhomirov, V. G., 2422
 Tikhonov, O. I., 2963
 Timchuk, K. S., 2158
 Timian, R. G., 1002
 Timofeeva, E. R., 950
 Timofeeva, M. K., 949
 Ting, W.-P., 3261, 3279
 Tinklin, R., 3479
 Tinline, R. D., 1260f
 Tinsley, T. W., 571, 3751
 Tircominicu, M., 2454, 2460
 Tirrò, A., 2998, 3276
 Tiwari, V. N., 1863
 Tjallingii, F., 1538x
 Tkachenko, M. P., 2867
 Tochihara, H., 1187, 3331
 Todd, F. A., 2027a
 Todorov, D., 3188
 Todorova-Ivanova, B., 957
 Toen, M. K. I., 3167
 Togonidze, E. V., 2642
 Tokeshi, H., 3005
 Tokunaga, J., 1950
 Toleman, E. E., 1868
 Toler, R. W., 1402
 Tolin, S. A., 428
 Toilenaar, H., 1176
 Tolmsoff, W. J., 3307
 Tomilin, B. A., 2786
 Tomiyama, K., 539, 2159
 Tomlinson, H., 561
 Tomlinson, J. A., 2261, 3066, 3151, 3555i, j, k, l, n
 Tompsett, B. P., 792
 Toms, H. N. W., 1730
 Tonini, G., 1708
 Toporovs'ka, Yu. S., 1835
 Torgeson, D. W., 2306
 Torikata, H., 2916
 Toriyama, K., 1363, 2852
 Toriyama, S., 396
 Torres, H., 2972
 Tošić, M., 2412
 Tóth, Á., 2373
 Toussoun, T. A., 959
 Toutain, G., 3431
 Touzé-Soulet, J.-M., 908
 Tragner-Bron, J., 1675
 Tran Van Ky, P., 1300
 Trappe, J. H., 21, 22
 Trappe, J. M., 260a, c, 358, 1913
 Travaglini, V., 2277, 2502, 2506
 Traylor, J. A., 210
 Tremaine, J. H., 3152
 Trentini, R., 1419
 Treshow, M., 360
 Tret'yak, R. P., 1543
 Tribun, P. A., 272
 Trifonov, D., 196, 197, 2522e, 2530
 Trinci, A. P. J., 3105
 Trione, E. J., 6
 Tripathi, N. N., 1662
 Tripathi, R. C., 1336, 1344
 Trivedi, N., 143
 Trofimets, L. N., 925
 True, L. F., 3286
 Trujillo, E. E., 3543
 Trunov, G. A., 614
 Truszkowska, W., 1979, 2180
 Trzebiński, J., 1194, 1830
 Tsai, J. H., 1198
 Tsai, Y.-P., 1025, 1100, 1101
 Tsanava, N. I., 2203, 2667
 Tsao, P. H., 3128, 3647
 Tsao, P. W., 3128
 Tschen, J., 1516, 2230
 Tseng, T.-T., 1939
 Tsikoridze, O. N., 434
 Tsilosani, G. A., 2296, 2670
 Tsimbal, M. M., 2044
 Tsuda, M., 1929, 1931, 2766
 Tsuyama, H., 790
 Tsvetanov, D., 2141
 Tu, C. C., 961, 962, 963, 1659, 2079
 Tu, J. C., 79, 1625, 2707, 3203, 3529
 Tucker, C. A., 330h
 Tudosecu-Bănescu, V., 1669
 Tuile, J., 1886, 2842
 Tulegenov, T. A., 1837
 Tunac, J. B., 127
 Turain, G., 3668
 Turel, F. L. M., 331v, 2493
 Turian, G., 967, 1248d
 Turner, E. A., 1489
 Turner, G. J., 90, 1447, 2394, 3563
 Turner, M. K., 3555a
 Turner, N. C., 371
 Turner, N. J., 3100, 3101
 Turner, P. D., 1753
 Turner, W., 525
 Tuşa, C., 2695, 2814, 3513
 Tverdokhler, N. S., 104

Twardowicz-Jakuszowa, A., 1147, 1537d
 Twumasi, J. K., 324j
 Tyagi, P. D., 1607, 1935
 Tyler, L. J., 443
 Tyrell, D., 1977

Ubaidullaev, Kh. Kh., 509, 1413
 Ubels, E., 1538z
 Ubrizsy, G., 1869
 Uchevatkin, F. I., 2868
 Uematsu, T., 570, 3271
 Uesugi, Y., 2741
 Ueyama, A., 1929, 1931, 2766
 Ullrich, J., 540
 Ullstrup, A. J., 5e, 3780
 Ulrychová, M., 1760, 3481
 Ul'yanishchev, V. I., 2783
 Umarov, Kh. U., 1036
 Umexurike, G. M., 1936
 Umland, T., 2518
 Unbehauen, L. M., 2644
 Unwin, C. H., 3228
 Uota, M., 1948
 Upadhyaya, J., 3351
 Upreti, G. C., 823
 Upshall, A., 67
 Upstone, M. E., 180
 Urban, Z., 435
 Urech, P. A., 3242
 Uremović, V., 1572
 Uritani, I., 1246, 1866, 2281
 Ururon, I. S., 2868
 Ushiyama, R., 1667
 Uspenskaya, G. D., 629, 1559
 Uyemoto, J. K., 1564, 3416
 Uziak, Z., 559

Vaartaja, O., 56, 652, 1494
 Vaartnou, H., 1690
 Vacke, J., 3752, 3779
 Vago, C., 852, 1315, 3178
 Vakili, N. G., 217
 Valášková, S., 3593k
 Valenčíč, L., 3508s
 Valenta, V., 2008a
 Valentine, R. C., 3149a
 Vallée, J.-C., 834, 835
 Vallier, J. P., 2307k
 Van Achter, A., 2727 l, 3660
 Van Arsdel, E. P., 331z
 Van Assche, C., 2727 l, 3660
 Van Bakel, J. M. M., 1538b
 Vandam, J., 3772
 Van Den Broek, H., 2727 l
 Van Den Ende, G., 3118
 Van Den Heuval, J., 3050
 Van Der Kamp, B. J., 870, 871, 3036
 Van Der Kerk, G. J. M., 1903, 2308k
 Van Der Meer, F. A., 1538o, 2522b, 3369
 Van Der Plaats-Niterink, A. J., 690
 Van Der Scheer, H. A. T., 190, 791, 1538a
 Van Der Spek, J., 1538j
 Vanderveken, J., 1838

INDEX OF AUTHORS

Van Der Wal, A. F., 3199
 Vanderwalle, R., 2
 Van Der Want, J. P. H., 3021
 Van Der Zwart, T., 207, 2118, 3382
 Van Dyke, C. G., 1627
 Vanek, G., 2008h, 3415
 Van Emden, J. H., 51, 1538i
 Van Etten, H. D., 37, 2232
 Van Etten, J. L., 6, 1938, 2754
 Van Haasteren, J. A., 2301
 Van Hoof, H. A., 1538i, 2727q
 Vaníčková, D., 2322
 Van Kammen, A., 3705
 Van Loon, L. C., 3705
 Van Norel, A., 1200
 Van Oosten, H. J., 2920, 3387
 Van Pelt, N., 2633
 Van Praagh, T., 3158
 Van Regenmortel, M. H. V., 75
 Van Scyoc, S. W., 2906
 Van Slogteren, D. H. M., 2727t
 Van Steyvoort, L., 1504
 Van Tiel, N., 3594d
 Van Tilburg, P. J., 3076
 Vardaniya, L. Ya., 1522
 Varela G., R., 1521
 Vargas, J. M., 1055
 Varma, A., 2026, 3346
 Varma, K. C., 2745
 Varma, P. M., 3399
 Varney, E. H., 3083e
 Vasil'eva, S. V., 1143
 Vasyagina, M. P., 58
 Vasyukova, N. I., 1462
 Vaught, H. C., 203
 Vázquez De Ramallo, N. E., 479
 Vazyulya, A. G., 519
 Veen, K. H., 2308q
 Veeraraju, V., 3256
 Vega, R. R., 3644
 Vegetti, G., 1562
 Veldeman, R., 2727h, i, j
 Velitskaya, I. S., 644
 Venette, J. R., 2604
 Venkata Ram, C. S., 2170
 Verderevskaya, T. D., 2522q
 Verhoeff, K., 1538c, 3006
 Verhoyen, M., 708, 3173, 3717
 Verma, G. S., 1683, 1773
 Verma, H. N., 1683, 1773
 Verma, J. P., 2491, 3314
 Verma, P. C., 724, 1003
 Verma, P. R., 606
 Verma, R. A. B., 3559
 Verma, S. C., 1336, 1645
 Verma, V. K., 1773
 Verma, V. S., 537, 2156
 Vermeulen, H., 2286k
 Verner, A. R., 1883
 Vernon, A. J., 2403
 Verona, O., 278, 384, 1293, 1553, 3132
 Victoria, J. I., 1739, 2564
 Vidano, C., 412, 457, 2052
 Vidaver, A. K., 3096
 Vidhyasakaran, P., 535, 741, 1845, 3566
 Vigodsky, H., 1051, 1052
 Vigouroux, A., 1729
 Villanueva, N. R., 993
 Vince, D. A., 3161
 Vink, G. M. J., 2893
 Vir, D., 1904
 Vishnichenko, V. K., 2988, 3160
 Vishwanath, N. R., 1381
 Vittal, B. P. R., 2622
 Vittorio, V. Di, 1744
 Viviano, S., 2259
 Vizárová, G., 1947
 Vizor, A. S., 930
 Vlasov, Yu. I., 1587
 Vodyanaya, L. A., 2896, 3635
 Voets, J. P., 2727u
 Voitovich, K. A., 3419
 Volkova, V. I., 2996
 Volkova, V. T., 2033
 Volodina, E. V., 2558
 Voronkova, A. A., 439
 Vőrős, J., 1869, 1980, 1981, 2340, 2513, 2962
 Vostrova, N. G., 248, 841, 2172
 Vovchenko, D. V. 1079
 Wackers, R., 1902
 Waffelaert, P., 1433, 1529
 Wagn, O., 589
 Wagner, C., 590
 Wagner, F., 462, 1012
 Wahl, I., 3214, 3234
 Wain, R. L., 3729b
 Waindi, E. N., 2286a
 Wainwright, S. H., 1247h
 Wakimoto, S., 570, 1260c, 3271
 Waksman, S. A., 3104a
 Wälchi, O., 880
 Walker, J., 1103
 Walker, J. C., 1824
 Walker, J. M., 909b
 Walkey, D. G. A., 76, 1858, 3066, 3153, 3555m, o, p, q
 Wallace, A. T., 1348
 Wallace, D. H., 1844
 Wallace, H. A. H., 452, 3225
 Wallace, J. M., 3275
 Wallbridge, A., 970
 Wallen, V. R., 2834
 Wallis, G., 260b
 Wallis, G. W., 1153
 Walters, H. J., 2243, 3053, 3084e, 3149e
 Walton, G. S., 1160, 3477
 Wamagata, F. M., 2286h
 Wan, H., 1479
 Wang, C.-S., 1129
 Wang, J. T., 5k
 Wang, S., 1501
 Wangikar, P. D., 2949, 2950
 Warcholowa, M., 1190, 1508
 Ward, R., 3149a
 Warmke, H. E., 2636
 Warner, G. M., 3571
 Wasfy, E. H., 2271
 Washio, O., 2852

Wassermann, O., 3608
 Wastie, R. L., 831, 2164, 2165b, 2615, 2616
 Watanabe, B., 1297
 Watanabe, M., 2099
 Watanabe, T., 473, 474
 Waterston, J. M., 2338
 Waterworth, H. E., 195, 770
 Watling, R., 2339
 Watson, A. G., 2694
 Watson, A. J., 93
 Watson, D., 682
 Watson, D. R., 2237
 Watson, D. R. W., 2241
 Watson, J., 2913
 Watson, L., 74
 Watson, M., 3077h, i, k
 Watson, R. D., 2027e, 2800
 Weathers, L. G., 1374, 2480, 3278
 Weaver, M. L., 1754a, 2977
 Webb, M. J. W., 3153, 3555p
 Webb, R. E., 2010cc, 2220
 Weber, E., 3656
 Weber, R., 2677
 Webster, D. H., 2115
 Webster, J., 1526, 2679
 Webster, R. K., 1987, 2352, 3796
 Węgorek, W., 323, 1062, 1537
 Węgrzecki, J., 1353
 Wehlburg, C., 5g, 330o, 3084c
 Weidemann, H. L., 2282f
 Weigle, J. L., 2233
 Weinhold, A. R., 1038
 Weinke, K. E., 2308f
 Weinstein, L. H., 3573
 Weir, L. C., 1814
 Weischer, B., 1771
 Weisgerber, H., 1163
 Welch, N. C., 2218
 Welling, B., 453
 Wellman, F. L., 3293, 3294
 Wells, H. D., 784, 1900
 Wells, J. M., 1948, 2119, 2132, 2935, 3071
 Wells, T. R., 11
 Weltzien, H. C., 518
 Wensley, R. N., 314
 Wenzl, H., 1116, 1118, 1123, 1872
 Westdal, P. H., 454
 Weste, G., 3758
 Wester, R. E., 3565g
 Westing, A. H., 376a
 Westlake, D. W. S., 42
 Weststeijn, G., 721a, 1538d
 Westwood, M. N., 1721
 Wetter, C., 702, 1626
 Wetzold, P., 1235
 Whaley, J. W., 3355
 Wheaton, T. A., 330b
 Wheeler, B. E. J., 1257
 Wheeler, H., 122, 332a, 1009, 2840, 3634, 3729a
 Wheeler, J. E., 2029, 2776
 Whitbread, R., 331f, 3486
 Whitcomb, R. F., 2010u
 White, B. L., 577
 White, J. H., 1755
 White, J. P., 1020

White, N. H., 368
 Whitehead, R., 2307d
 Whitehead, W., 3786
 Whitfield, W. J., 1887e
 Whitney, H. S., 3038
 Whitney, J. D., 330
 Whitney, R. D., 394, 878
 Whittenbury, R., 2295, 3577,
 3578
 Whittington, W. J., 3771
 Wick, C. M., 3796
 Wicks, T. J., 198
 Widdowson, F. V., 3191
 Wiebe, H.-J., 1235
 Wiegershausen, B., 1251
 Wiese, M. V., 3303, 3305
 Wiesner, K., 892, 3508m
 Wiggell, P., 2307r
 Wightman, D. L., 1284
 Wightman, K. A., 2539
 Wilbur, W. D., 3661
 Wilcox, H. J., 3730a
 Wilcoxon, R. D., 1055,
 2059, 3193, 3759
 Wilde, S. A., 932
 Wilhelm, S., 1095
 Wilhelmsen, G., 1182c
 Wilkinson, R. E., 1844, 3521
 Wilkinson, V., 378, 923,
 2830
 Willets, H. J., 191, 2353
 Williams, D. D. F., 3334
 Williams, E. B., 1212, 1260i,
 2531, 2906
 Williams, N. D., 1588
 Williams, P. G., 1325
 Williams, P. H., 287, 1824,
 3042, 3501, 3505, 3538
 Williams, T. D., 998
 Williams, T. H., 329, 3562
 Williams, W. T., 391, 2352
 Williamson, B., 3618
 Williamson, C. J., 2915
 Williamson, K. J., 2365
 Wills, W. H., 1775
 Wilson, C. L., 9, 1260q,
 2291
 Wilson, D. M., 628, 1926
 Wilson, E. E., 2737
 Wilson, H. M., 3557b
 Wilson, J. M., 3254
 Wilson, K. I., 2983
 Wilson, R. A., 1247e
 Wilson, V. E., 2227
 Wimalajeewa, D. L. S., 3460
 Winder, G. H., 3077p
 Wingfield, E. B., 661
 Winkler, R., 3097
 Winspear, K. W., 2654
 Wislocka, M., 2590
 Witchalls, J. T., 2829
 Witcher, W., 1795
 Witkowski, W., 1537k
 Wittman, W., 3350
 Wogan, G. N., 2293
 Wojciechowska, H., 184
 Wolf, F. A., 1952
 Wolf, F. T., 1954
 Wolf, R. T., 1676
 Wolfe, M. S., 2307c, 3556a, h
 Wolfgang, H., 2631, 3696
 Wolitz, S. S., 330f, 941, 3485
 Woo, J. Y., 2662
 Wood, D. R., 1510
 Wood, F. A., 258, 324q,
 665, 857
 Wood, G. A., 1418, 2918,
 2919
 Wood, R. E., 3029, 3030
 Wood, R. K. S., 294, 2072,
 2758, 3522
 Woodbridge, C. G., 1842
 Woodbury, W., 332b, 3122
 Woodcock, D., 351, 1267
 Woodford, J. A. T., 2968
 Woodroffe, R., 2307t
 Woods, R. D., 1135, 3161
 Woolfitt, J. M. G., 76, 3555
 o, q
 Worf, G. L., 5e, 3248
 Worgan, J. T., 2293
 Worley, J. F., 2386
 Wright, C. E., 183
 Wright, J. R., 27
 Wright, N. S., 1754d, 2157
 Wrisscher, M., 78, 2547
 Wu, D. K., 1561
 Wu, J. K., 1479, 1561
 Wu, L.-C., 2236
 Wu, T.-H., 3237b, c
 Wu, T. K., 1479
 Wurtz, M., 709, 710, 842
 Wuttke, H. H., 847
 Wyatt, S. D., 2021
 Wyllie, T. D., 154, 607,
 2730, 2731, 3304

Yadav, A. S., 1863, 3640
 Yadava, H. R., 732, 1345
 Yamada, K., 722
 Yamaguchi, A., 1310
 Yamaguchi, T., 1365, 1638
 Yamamoto, T., 751
 Yang, C. M., 1023
 Yang, C. Y., 332c
 Yang, Y. Y., 1023
 Yaniv, Z., 1951
 Yaraguntaiah, R. C., 2470,
 2714
 Yaremenko, Z. I., 434
 Yarham, D. J., 2307g
 Yarrow, D., 3670
 Yarwood, C. E., 324z, 899,
 1560, 3088
 Yassin, A. M., 3300
 Yasuda, Y., 556, 2987
 Yasuo, S., 1365, 1638
 Yen, J.-M., 2805, 3134
 Ylänen, M., 3754
 Ylimäki, A., 506, 1693, 1694
 Yoder, O. C., 1622, 2450
 Yora, K., 396
 Yoshii, H., 402, 1312
 Yoshinaga, E., 2308t
 Yoshino, M., 3321

Yot-Dauthy, D., 706
 Young, B. R., 2943
 Young, C. W. T., 869
 Young, J. M., 603, 720, 886
 Youssef, Y. A., 379
 Yu, C., 1046
 Yunoki, T., 1611
 Yusef, H. M., 2121
 Yusim, F., 3667

Zaichenko, O. M., 1922,
 1923
 Zainutdinova, K. M., 653
 Zak, B., 2318
 Zakirov, T. S., 92
 Zakirova, N. F., 1013
 Zalpoor, N., 2991
 Zarubina, M. A., 1599, 1601
 Zarzycka, H., 1044, 2147
 Zaumeyer, J., 2227
 Zaumeyer, W. J., 1247j
 Žáčský, J., 1193
 Zedginidze, I., 2456
 Zehr, E. I., 3579
 Zeijlemaker, F. C. J., 1789
 Zemlina, A. G., 2810, 3216,
 3238
 Zenteno Zevada, M., 3116
 Zentmyer, G. A., 68, 487,
 1290, 3565a, 3623
 Zerekidze, R. I., 2053
 Zerov, D. K., 60
 Zerova, M. Ya., 60, 1544,
 3627
 Zettler, F. W., 296, 2248
 Zeyen, R. J., 2836
 Zgórkiwicz, A., 1537h
 Zhabinskaya, L. P., 158
 Zhalnina, L. S., 1388
 Zhemchuzhina, A. I., 2811
 Zherebchuk, L. K., 2017
 Zhilin, A. N., 3642
 Zhuk, I. P., 1115
 Zhuravleva, V. P., 1032
 Ziegler, E., 3765
 Ziller, W. G., 856, 1154
 Zimandl, B., 2523o
 Zimmer, D. E., 2152, 2957
 Zimmerman-Gries, S., 3437,
 3438
 Zinca, N., 2572
 Zink, F. W., 903, 1819
 Zislavsky, W., 912
 Zitter, T. A., 1311
 Zlotina, G. D., 984
 Zscheile, F. P., 132
 Zschüttig, H. G., 3694
 Zuang, H., 1531
 Zuber, M. S., 2463
 Zuckerman, B. M., 1015
 Zufa, L., 2201
 Zvyagintseva, Yu. V., 2975
 Zwatz, B., 436, 466, 2408
 Zwolińska-Śniatałowa, Z.,
 1537e
 Zych, C. C., 801
 Zycha, H., 590, 1181

GENERAL INDEX

Review Articles

A bibliography of lists of plant diseases and fungi. II. Asia: 103-108.

Recent review articles on plant pathology: 323-329.

BOCK, K. R. Plant pathology in E. Africa: 1-6.

BRADBURY, J. F. Isolation and preliminary study of bacteria from plants: 213-218.

MEREDITH, D. S. Major banana diseases: past and present status: 539-554.

This is basically a host-pathogen index. Entries are analysed under the host; abstract numbers only are given under the pathogen. New records are indicated by an asterisk *.

- Aabulba* as seed treatment for potato, 541.
- Aardisan* against *Corticium* on potato, 542; as seed treatment for potato, 541.
- causing potato mutation, 542.
- Abacarus* not transmitting brome mosaic virus, 1566.
- Abies alba*, *Fomes annosus* on, factors affecting decomposition, 3498.
- , *Pucciniastrum pustulatum* on, USSR, 272.
- *balsamea*, *Melampsora caryophyllacearum* on, pathological anatomy, 577.
- , *Nectria fuckeliana*, *Pseudophacidium piceae* and *Scoleconectria cucurbitula* on, Canada, pathogenicity, 1496.
- *— *bracteata*, *Lirula nervisequja* var. *conspicua* on, USA (Calif.), causing needle-cast, 3024.
- *concolor*, *Cytospora abietis* on, USA, *Arceuthobium campylopodum* f.sp. *abietinum* associated with, 1166.
- *grandis*, *Fomes annosus* on, resistance, 2189b.
- *magnifica*, *Cytospora abietis* on, USA, *Arceuthobium campylopodum* f.sp. *abietinum* associated with, 1166.
- *pectinata*, *Fomes annosus* on, effect of root exudates on growth, 3026.
- Absidia corymbifera* on barley, stored, 1346, 2835a.
- *glauca*, effect of antibiotics on growth, 3105.
- Acacia mearnsii*, (?)*Phytophthora nicotianae* var. *parasitica* on, 1789.
- Acer*, *Polyporus glomeratus* and *Poria obliqua* on, mode of entry and canker formation, 259.
- , sensitivity to ozone, 857.
- *macrophyllum*, *Rhytisma punctatum* on, USA, life history, 2662.
- *negundo*, *Diplodia atrata* on, conidial viability, 3627.
- *platanoides*, salt injury, factors affecting and symptoms, 1160.
- *pseudoplatanus*, *Cristulariella depraedans* on, UK, 2189f.
- , *Gloeosporium platani* on, USSR, 2667.
- , *Inonotus arizonicus* on, 1161.
- , *Rhytisma punctatum* on, USA, life history, 2662.
- *saccharum* canker, USA, fungi associated with, 2661; *Fusarium solani* causing, 258.
- [*Acer saccharum*], *Coniochaeta velutina* on, use in ecological studies, 859.
- , defects associated with discolouration and decay, 2659.
- , *Fomes connatus* and *F. fomentarius* on, causing discolouration and decay, microbial succession, 2660.
- , *Fusarium solani* on causing canker, 258.
- , ozone injury, 1159.
- Aceria tulipae*, distribution of wheat streak mosaic virus in, 429.
- , synergism between wheat streak mosaic virus on maize and, 127a.
- transmitting 'wheat variegation' disease, 5h.
- Achlya klebsiana* on rice, 3796.
- Achras sapota*, *Botryodiplodia theobromae* on, utilizing amino acids, 3639.
- Achromycin* against maize stunt disease, 1247a; sugarcane white leaf disease, 832.
- , effect on aster yellows on aster, celery and *Plantago major*, 2024; *Xanthomonas oryzicola* on rice, 2854.
- Acroconidiella tropaeoli* on *Tropaeolum majus*, 1685.
- **Acrospeira fluctuata* on sorghum, 746.
- Actidione* against *Diplodia* on peach, 2121.
- , effect on fungal growth, 3105; *Pyricularia oryzae*, 3262a, b.
- , ferrated, against *Didymascella thujina* on *Thuja plicata*, 2189c.
- Actinidia chinensis*, *Phomopsis* on, USA imported from NZ, symptoms, 2944.
- Actinomycete* on Coniferae, forming mycorrhiza, 3611.
- Actinomycetes*, cellulolytic and pectolytic activity, 3654.
- Actinomycin D*, effect on incorporation of uridine into virus-infected leaves, 976; plant virus multiplication, 3157; RNA synthesis in virus-infected leaves, 3156.
- Actispray* against *Didymascella thujina* on *Thuja plicata*, 2189c.
- Acyrthosiphon dirhodum* transmitting barley yellow dwarf virus, 118.
- *pisum* not transmitting pea mosaic virus, 1062.
- transmitting alfalfa mosaic virus, 1062, 1306; pea enation mosaic virus, 292, 601, 1198, 1838, 2226; pea mosaic virus, 600; pea streak virus, 1306.
- Adenophora triphylla*, *Coleosporium campanulae* on, Japan, pathogenicity, 277.

GENERAL INDEX

Acidium on hops, 918.
Aegilops triuncialis, *Ustilago mesatlantica* on, Morocco, 2342.
Aeglopsis, Satsuma dwarf virus on, susceptibility, 478.
Aerobacter associated with tomato grey wall, 1152.
 — *aerogenes* inhibiting *Venturia inaequalis*, 2725b.
 — *cloacae* on tomato, 330j.
Aesculus carnea, strawberry latent ringspot virus on, differentiation of isolates and transmission, 1158.
 Agarics and Boleti, introduction, British fungus flora, book on, 2339.
Agaricus, see Mushroom.
Agave, *Phytophthora arecae*, *P. nicotianae* and *P. palmivora* on, Tanzania, causing zebra disease, 1385.
 — *fourcroydes*, *Fusarium* on, Cuba, 492.
 — *sisalana*, see Sisal.
Ageratum houstonianum, tomato aspermy virus on, 2882.
 Agricultural chemicals, approved, annual list of, 1895.
 — pesticides and their application, book (Spanish), 1253.
Agrimycin as seed treatment for sesame, 2961.
 —, effect on *Xanthomonas oryzicola*, 2854.
 —, 17 against *Erwinia amylovora* on apple, 206, 2537.
Agrobacterium, nutrition and tumour initiation, 1890.
 —, selective medium for, 2302, 3576, 3577.
 — *radiobacter* in rhizosphere of wheat, 1001.
 —, on stone fruit, 345.
 — *tumefaciens*, adenosine triphosphatase in, 10.
 —, biochemistry of tumour induction, 2300.
 —, characteristics of different strs., 640.
 —, effect of phenyl ethyl alcohol, 1892.
 —, gravity in relation to tumour development, 11.
 —, growth requirements and infectivity, 926.
 * —, hosts, 344.
 —, induction of tumours by viral DNA, 331n.
 —, interspecific transformation between *Rhizobium leguminosarum* and, 641.
 —, on apple, 2538.
 —, on bean, 301, 3588.
 —, on *Begonia*, 2085.
 —, on broad bean, 3587.
 —, on grapevine, see Grapevine.
 —, on hemp, 166.
 —, on *Kalanchoe daigremontiana*, 2301.
 —, on pea, 898.
 —, on pecan, 267.
 —, on quince, 2538.
 —, on *Ricinus communis*, 3588.
 —, on *Rosa* and *Sedum*, 189.
 —, on stone fruit, 345.
 —, on tobacco, 850.
 —, on tomato, 1263.
 —, review of literature, 2300.
 —, transmitted by nematodes, 1893.
 —, bacteriophage, properties, 3586; transmitted by nematodes, 1893.
 Agronal as seed treatment for lentil and pea, 3516.
Agropyron, brome mosaic virus on, USSR, 1566.
 —, *Septoria* on, USSR, source of infection for cultivated Gramineae, 2100.
 — *tenerum*, *Puccina graminis* on, USSR, specialized form, 2033.
 Agrosan as seed treatment for barley, 3220; cotton, 3298a.
 —, effect on *Foeniculum vulgare* seed, 3426.
 —, GN against *Sphacelotheca cruenta* on sorghum, 1361; as seed treatment for cotton, 3313; cucumber, 3542; *Cyamopsis psoraloides*, 1855; sorghum, 468; soybean, 2708; tomato, 1317; wheat, 2429.
 —, 5W against *Ustilago hordei* on oats, 737; as seed treatment for cotton, 761a.
Agrostis palustris, *Ustilago striiformis* on, factors affecting growth, 3356.
 —, —, var. *agrostidis* on, histopathology and symptomatology, 1054.
 — *producta*, *Puccina graminis* on, Kenya, 2406.
 — *tenuis*, *Sclerotinia homoeocarpa* on, control, 3355.
 Air pollution, USA, 2484; damage to bean, 2703; citrus, 2484, 3801; plants, 3573, 3750; in relation to pine chlorotic dwarf disease, 2680; review, 3573.
 —, 996; Baltic, 449; Canada, 3189; Denmark, 449; India, 3559; Kenya, 2406; Morocco, 1882; Wales, 338.
 Aircraft for spraying, 804, 854e, 1071, 1379, 1467e, 1754e, 3291, 3410, 3508d, 3564b.
Albugo candida on Indian mustard, 1823.
 — *ipomoeae-panduratae*, comparison with *A. ipomoeae-aquatica*, 1534.
Alder (*Alnus*), *Godronia fuliginosa* on, Canada, pathogenicity, 858.
 —, *Hypoxyylon fuscum* on, review, 260d.
 —, mycorrhiza, 260a.
 —, *Poria weiri* on, factors affecting resistance, 260b, c.
Aleurites, *Fusarium* on, USSR, aetiology and pathogenicity, 2965.
 Alfalfa mosaic virus, effect of basidiomycete extracts, 3697; oxidised phenols, 3714.
 —, —, hosts, 3716.
 —, —, on bean, 3173, 3634.
 —, —, on *Capsicum*, 2377, 3547.
 —, —, on *Cicer arietinum*, 1519.
 —, —, on clover, 179c, 2897.
 —, —, on *Leguminosae*, 3691.
 —, —, on lucerne, see Lucerne.
 —, —, on pea, 5b.
 —, —, on sweet pea, 1306.
 —, —, on tobacco, see Tobacco.
 —, —, on tomato, 2999.
 —, —, paper on, 3149f.
 —, —, reversible dissociation and reconstitution, 709, 710, 3361.
 —, —, separating particle fractions, 2282f.
 —, —, technique for detecting particles, 396.
 —, —, strs., infectivity of RNA, 2376.
 Alkylarylcarbonates, biological properties, 3593b.
 Alkylaryl sulphonates, use on barley, 1618.
 Alkyldinitrophenols, fungicidal activity, 351a, 1898.

GENERAL INDEX

Allisan against *Sclerotinia sclerotiorum* on *Gerbera*, 1051.
 — effect on *Sclerotinia gladioli* on *Gladiolus*, 1052.
Allium, *Sclerotium cepivorum* on, 720; effect of alkyl sulphides on germination of sclerotia, 1229a.
 — *ascalonicum*, see Shallot.
 — *bakeri*, see Scallion.
 — *cepa*, see Onion.
 — *porrum*, see Leek.
 — *sativum*, see Garlic.
 — *schoenoprasum*, see Chives.
 Almond (*Prunus amygdalus*), apple chlorotic leaf spot virus on, 189.
 —, *Fusicoccum amygdali* on, Tunisia, 2902b; control, 2125; var. react., 2902b.
 —, *Gloeosporium amygdalinum* on, Tunisia, 2902b.
 — mosaic virus on almond, particles and transmission, mechanically, 2522t.
 —, *Valsa cincta* and *V. persoonii* on, USSR, 1089.
Alnus, see Alder.
Alopecurus pratensis virus diseases, 2008b.
Alsike, see Clover.
 **Alternanthera amoena*, *Corticium rolfsii* on, 167.
Alternaria alternata associated with *Puccinia striiformis* on wheat, 1595; wheat brown necrosis, 993.
 —, effect of CO_2 and O_2 on, 1948; MgSO_4 on, 944.
 —, lysosome contents, 2291.
 — on barley, 452, 1346, 3226.
 — on bean, see Bean.
 *— on beet, *891, 2225.
 — on carnation, 1673.
 — on citrus, 481.
 — on clover, 1059.
 — on cotton, 1664, 2874.
 *— on *Crambe abyssinica*, 2148.
 — on *Ocneria dispar*, USSR, 346.
 — on orange, 481.
 *— on *Phaseolus aureus*, 3527.
 — on poplar and *Salix*, 3020.
 *— on *Tabernaemontana coronaria* and *T. heyneana*, 3351.
 — on tomato, 2650.
 — on wheat, 2044, 3207.
 —, physiology, 3646.
 *— *brassicae* on beet, 891.
 — on *Brassica*, 714.
 — on cauliflower, 2217.
 — on *Crambe abyssinica*, 2148.
 — on *Eruca sativa*, 3503.
 — *brassicicola*, CMI map, 84.
 —, effect of fungicides, 930, 3555c; ozone, 360.
 —, electron microscopy, 2349, 2788, 3138.
 — in soil, 3665.
 *— on *Crambe abyssinica*, *2148, 2149.
 — *burnsii* on cumin, 817.
 — *carthami*, CMI description, 3131.
 — *citri*, CMI description, 3131.
 —, effect of MgSO_4 , 944.
 — on cotton, 158.
 — on orange, 1549.
 —, physiology, 3646.
 — *crassa*, CMI description, 3131.
 — *cucumerina*, CMI description, 3131.
 *— on watermelon, 3546.
 [*Alternaria*] *dauci* on carrot, 616, 1527, 3539.
 — *humicola* on timber, 586.
 — —, producing enzymes, 953.
 — *japonica* on radish, 286.
 — *kikuchiana*, factors affecting sporulation, 3119.
 — — on pear, 2916.
 — *leucanthemi*, *A.* on sunflower similar to, 3428.
 — *longipes*, CMI description, 3131.
 — — on tobacco, 329e, 558g, 636a, c.
 — *macrospora* and *A. passiflorae*, CMI description, 3131.
 — *poonensis* on coriander, 226.
 — *porri*, CMI description, 3131.
 — — f.sp. *cichorii* on endive, 2260.
 — *ricini*, CMI description, 3131.
 *— on *Ricinus communis*, 3564b.
 — *senecionis* on *Cineraria*, 2502.
 — *sesami*, CMI description, 3131.
 — *solani* associated with *Colletotrichum kuegerianum* on tomato, 3004.
 — —, compounds causing broken spores, 5a.
 — — on potato, see Potato.
 — — on tomato, see Tomato.
 — *tenuis*, see *A. alternata*.
 — *tenuissima* in soil, 2790.
 — — on *Capsicum*, 631.
 — — on cotton, 1664.
 — — on grain, 97.
 — *tomato*, medium for studying, 2760.
 — *triticina* on wheat, 1336, 3770.
 — *zinniae* on bean, 3050.
Althaea rosea, see Hollyhock.
 Aluminium, toxicity to wheat, 1616.
Amanita mappa and *A. muscaria* on *Pseudotsuga menziesii*, forming mycorrhiza, 3611.
 — *rubescens* on spruce, forming mycorrhiza, 3611.
 Amaranthaceae as indicator for potato virus S, 2593.
Amaranthus caudatus, beet mosaic virus can infect, 3508k.
Amaryllis, *Curvularia trifolii* f.sp. *amaryllidis* on, 919a.
Amelanchier alnifolia, *Gymnosporangium cupressi* on, alternate host, 867.
 2-aminobutane against citrus decay, 330k, 3284; *Colletotrichum musae* on banana, 1736; *Penicillium digitatum* on orange, 3283; post harvest decay of fruit, 2739.
 —, new compound, 645b.
 —, residues in citrus, 3284.
 2-aminopyridine against *Rhizopus arrhizus* on mango, 3379.
 2-aminothiazole against *R. arrhizus* on apple and mango, 3379.
Ammi visnaga, aster yellows on, Rumania, 981.
 Ammonia, effect on *Phytophthora cinnamomi* on avocado pear, 218a.
 —, hypersensitive reaction of tobacco to, 2179.
 — injury to *Euphorbia pulcherrima*, 913.
 — in relation to *Erwinia amylovora* on apple, 3377; *Pseudomonas tabaci* on tobacco, 1142.

GENERAL INDEX

Ammonium compounds, quaternary, against *Ceratocystis fimbriata* on *Hevea* rubber, 831.
 — sulphate, effect on microflora in rhizosphere of *Eleusine coracana*, 3664.
 — —, use on rye and wheat, 3754.

Amrasca devastans not transmitting groundnut rosette virus, 2712.

Amylostereum areolatum in symbiosis with *Sirex noctilio*, 283, 284.
 — — on pine, 1495.

Ananas comosus, see Pineapple.

Anaguinon against *Plenodomus destruens* on sweet potato, 3551.

Anethum graveolens, see Dill.

Animals, carbonin in, 2308c.

Anise (*Pimpinella anisum*) virus diseases, 2008f.

Annona reticulata, see Custard apple.

Ansar 529M inducing *Hevea* rubber wintering, 1467e.

Anthocephalus cadamba, *Mycena citricolor* on, Costa Rica, 3010.

Antibiotic produced by *Streptomyces griseoplanus*, 3108.

Antibiotics against plant diseases, Japan, 2744; *Podosphaera leucotricha*, 2533.
 — effect on *Botrytis cinerea*, 655; *Cochliobolus miyabeanus*, 3756; *Fomes annosus*, 3106; *Peronospora tabacina*, 2174; tobacco mosaic virus synthesis, 2795; *Ustilago nuda* on wheat, 3756.
 — from *Alternaria*, 20, 672.
 —, search for, 3104a.
 —, polyene, effect on *Eremothecium ashbyi*, 656.

Antimucin against *Phytophthora botryosa* and *P. palmivora* on *Hevea* rubber, 831.

Antrirrhinum, citrus variegation virus on, effect on, 3175.

*—, *Fusarium (?)solani* and its var. *martii* on, India, morphology and pathogenicity, 2880.
 —, *Oidium* on, control, 2879.
 —, *Puccinia antirrhini* on, UK, 1389; control and var. react., 1672.
 —, *Thielaviopsis basicola* on, control, 2879.

Antracol against *Botrytis cinerea* on grapevine, 1745; *Corynespora cassiicola* on sesame, 2960; *Diplodia natalensis* on mango, 2941; *Pseudoperonospora cubensis* on cucumber, 2265; *P. humuli* on hop, 1747; *Uromyces dianthi* on carnation, 1675.
 —, effect on *Pyricularia oryzae*, 3560f.

Apera spica-venti, *Cercospora herpotrichoides* on, effect of crop rotation, 2426.

Aphalara polygonum transmitting buckwheat virus, 2479.

Aphanomyces cochlioides on beet, 3508f.
 — *euteiches* in soil, 2696.
 — —, obtaining viable oospores, 3680.
 — —, on pea, see Pea.
 — —, properties and purification of endopolygalacturonase, 28.
 — — + *Fusarium solani* f.sp. *pisi* in soil, 602.

Aphelenchoides ritzemabosi associated with *Phytophthora cryptogea* on gloxinia, 330m.
 — —, multiplication in tobacco mosaic virus-infected tobacco, 1771.

Aphelenchus avenae, immobilization by *Aspergillus niger*, 8.

Aphids in relation to potato haulm destruction, 3435; to potato leaf roll virus, 1754d.

— transmitting cucumber mosaic virus, 2130, 2274; *Desmodium* virus, 2248; gooseberry veinbanding virus, 2130; maize mosaic virus, 3238; pea mosaic-type virus, 598; potato leaf roll virus, 3445; potato virus Y, 2274; sugarcane grassy shoot virus, 1470; sugarcane mosaic virus, 1470; sweet potato virus, 2565f.

Aphis craccivora transmitting bean common mosaic virus, 296; cowpea C virus, 2286f; groundnut rosette virus, 2712; tobacco etch virus, 2990; *Wisteria* vein mosaic virus, 2013.

— *fabaæ* transmitting alfalfa mosaic virus, 1062; celery mosaic virus, 617.

— *frangulae* transmitting potato virus Y, 2591.

— *gossypii* transmitting celery mosaic virus, 617; citrus tristeza virus, 2481, 2856; eggplant mosaic virus, 3073; papaw mosaic and ringspot viruses, 1740b.

— *nasturtii* transmitting potato virus Y, 2591.

— *nerii* transmitting papaw distortion ringspot virus, 3408.

Aphrodes bicinctus transmitting clover disease, 1408.

Apium graveolens, see Celery.

Aplanobacter populi, CMI description, 3090.
 — — on poplar, 2189d, 2201.

Apparatus [see also Technique] for culturing aquatic phycomycetes, 3681; *Olpidium brassicae*, 324i, 3148; evaluating soil fungicides, 2358; soil organisms, 45; growing cultivated mushrooms in filtered atmospheres, 375; isolating infected plants, 2004; measuring intensity of *Alternaria triticina* on wheat, 1336; monitoring cereal rust uredospores in rain, 2034; recording dew, 3688; relative humidity, 2003; wetness, 3687; sampling spores, 3686; sterilizing soil, 679; studying interrelationships of soil micro-organisms and plant roots, 2357; survival of bacteria in air, 974; transferring fungi, 2358; treating seed, 1574, 3147.

Apple (*Malus pumila*), *Agrobacterium tumefaciens* on, var. react., 2538.

—, *Armillaria mellea* on, control, 1426.

— bark disease in Germany (E.), fungi associated with, 2534.

— bitter pit in NZ, 2913; control and correlation with *Gloeosporium*, 1715.

— boron deficiency, India, control, 1716; symptoms, 516.

—, *Botryosphaeria ribis* on, NSW, 3370.

—, *Botrytis cinerea* on, Germany (E.), associated with bark disease, 2534.

— brown ringspot virus complex, Czechoslovakia, transmission by vectors, 2522h.

— chat fruit, electron microscopy and *Mycoplasma*-like cells in, 2725g; relationships, 2107.

— chlorotic leaf spot virus, detection and hosts, 1074a.

— — — — on apple, Czechoslovakia, 2522h; Denmark, 2904, 2905; Netherlands, 1538o; Rumania, 2524; detecting, 195; hosts, 189, 1698; perpetuation in root

stocks, 2905; properties, 189, 1698; transmission by grafting and mechanically, 195, 1698; by vectors, 2522h; types, 1698; var. react., 196, 2524.

[Apple chlorotic leaf spot virus] on pear and *Phaseolus*, 1538o.

— — — — — relationships, 2522b.

— — — + strawberry latent ringspot viruses on *Chenopodium amaranticolor*, 3384.

— cork spot, factors affecting, 2539.

—, *Cryptosporiopsis corticola* on, USSR, *Pezicula corticola* perfect state, 2112.

—, *Cytospora capitata* on, USSR, pathogenicity, 1080.

—, *schulzeri* on, USSR, 2111.

— dark green epinasty virus on apple, transmission by grafting and mechanically, 195.

— decline caused by apple flat limb virus, 786.

—, *Diaporthe perniciosa* on, Czechoslovakia, control, 1425; England & N. Ireland, 1710.

— diseases, control, 650, 1547.

—, *Dothiorella* on, NSW, 3370.

— E36 virus, relationships, 2522b; symptoms, 2522c.

—, effect of captan, dichlone and dodine on, 1072; of fungicides on fruit set, 2535.

*—, *Erwinia amylovora* on, *Denmark, 3081; England, 792; Advis. Leafl., 2116; ammonia in relation to symptom expression, 3377; control, 206, 792, 2537; *Crataegus* as source of infection, 792; normal and filamentous forms, 3583.

— flat apple virus on apple, relationships, 2107.

— — limb virus on apple, Iran, 3735c; NZ, causing decline, 786.

— GE 36 virus, relationships, 2522b.

—, *Gloeodes pomigena* on, India, 3559.

—, *Gloeosporium* on, Belgium, 1706; England, 1710; France, 1706; N. Ireland, 1710; control, 1706.

—, *Glomerella cingulata* on, resistance, 1709, 3376.

— green mottle virus on apple, chat fruit and flat apple symptoms produced by, 3083f; relationships, 2107.

— Jonathan spot, characteristics, 205; control, 794.

*—, *Lambertella corni-maris* on, Japan, description, 202.

— latent viruses, 2522e; differential diagnosis, 2522d; indicators, 2522f.

— lenticel spot, characteristics, 205.

— mineral deficiency, factors affecting, 2539.

— mosaic, component viruses and properties, 2522k.

— — virus on apple, Denmark, 2904; Rumania, 2524; detection, 193; effect of temp., 2523l.

— — — on plum, 1725.

—, *Nectria* on, Germany (E.), associated with bark disease, 2534.

—, *galligena* on, Ireland, 1420; N. Ireland, 1710; antifungal compounds induced by, 2726c; control, 1420, 2114, 3079c; effect on refrigerated gas-stored, 1710; growth substances in relation to, 2911; var. react., 2910.

[Apple] nutritional disorders, 913.

—, *Penicillium expansum* on, N. Ireland, 1710; control, 203; effect on refrigerated gas-stored, 1710; properties of endo-polygalacturonase, 2726c; susceptibility to auxotrophic mutants, 204.

—, *Pezicula alba* on, Netherlands, 1538a; NSW, 2113; control, 1708, 2725d; factors affecting, 190a; spore production, 2725d; sources of infection, 2725d.

—, *malicorticis* on, Netherlands, 1538a; USSR, 201; control, 515, 2725d, 3079c; factors affecting, 190a, 201; spore production, 2725d; sources of infection, 2725d; synonymy, 201.

—, *Physalospora obtusa* on, overwintering, 2907.

—, *Phytophthora cactorum* on, 1426; Canada, 514; Irish Rep., 1712; brown rot caused by *P. syringae* identical with, 1712; effect of bark substances, 2110; factors affecting, 791; selecting resistant vars., 2909; var. react., 791.

*—, — *syringae* on, *Canada, 2908; Irish Repub., 1712; factors affecting, 2908; identical with brown rot caused by *P. cactorum*, mode of entry, and soil as source of infection, 1712.

— *platycarpa* scaly bark virus on apple, Denmark, 2904, 2905; perpetuation in rootstocks, 2905.

—, *Pleospora* on, Germany (E.), associated with bark disease, 2534.

*—, — *herbarum* on, Canada, chilling injury in relation to, 1081.

—, *Podosphaera leucotricha* on, Argentina, 3085; Belgium, 1706; France, 1422, 1706; Germany (E.), 2284; Ireland, 1420; Poland, 1423a, b, 2105; USSR, 789, 1079, 1704, 2109, 2533; breeding against, 1077; control, 199, 513, 789, 1078, 1079, 1417, 1420, 1422, 1702, 1706, 2105, 2310, 2533, 2725c, 3079c, 3085, 3374; damage, 1424, 1703; dissemination, 1423b; effect of fungicides, 351a, 2725j; epidemiology, 2725c; factors affecting, 1423a, 2109; germination of ascospores, 790; incidence, 1704; losses, 1424; overwintering, 200, 789, 1423a; var. react., 1077, 1704.

— proliferation virus on apple, Rumania, 2524; ?mycoplasma causing, 3367; symptomless host, 3367; testing for, 2522g.

—, ?*Pseudomonas* on, USSR, symptoms, 2529.

*—, — *syringae* on, *Canada, symptoms, 2912; USSR, 1714.

—, *Pythium* on, 190b.

—, — *sylvaticum* on, control, 190b.

— reticulate wood necrosis, new virus symptom, 1247g.

—, *Rhizopus arrhizus* on, control, 3379.

—, rootstocks for, Advis. Leafl., 1073.

—, *Rosellinia necatrix* on, 1426.

— 'rough bark diseases', transmitted by grafting, 2106.

?— — skin virus on apple, transmitted by grafting, 1419.

— rubbery wood virus on apple, Denmark, 2904, 2905; NZ, 1418; detecting, 197; perpetuation in rootstocks, 2905; var. react., 197.

GENERAL INDEX

[Apple] russetting, induction stages, 3378.
 — scaly bark virus on apple, Denmark, 3081.
 —, *Schizophyllum commune* on, factors affecting, 3375.
 —, *Sclerotinia* on, control, 3079c.
 — Spy epinasty virus on apple, Denmark, 2904, 2905; perpetuation in rootstocks, 2905.
 — — — lethal virus on apple, Rumania, 2524.
 — stem-cavity browning, factors affecting, 2115.
 — stem grooving virus on apple, purification and relationship of isolates from Europe and N. America, 1075.
 — — — (E36) on apple, Netherlands, 1538o.
 — — — pitting virus on apple, Denmark, 2904, 2905; detection, 194; perpetuation in rootstocks, 2905.
 — storage disorders, 793, 794, 1706; N. Ireland, 1710; control, 1713, 2536; description and identification, 1711; effect of controlled atmospheres, 1081; of fungicides, 2725j; factors affecting, 2726c.
 —, tobacco mosaic virus on, 1076; Denmark, 322; Netherlands, detecting, 3369.
 —*, tomato bushy stunt virus on, transmission by seed, 1076.
 —, toxicity of fungicides, 2725j.
 —, *Trichoseptoria fructigena* on, control, 515.
 —, *Trichothecium* on, Germany (E.), associated with bark disease, 2534.
 —, — *roseum* on, growth and sporulation, 3645.
 — Tulare mosaic virus, chemical properties, 2525.
 —, *Valsa* on, Germany (E.), associated with bark disease, 2534.
 —, *Venturia inaequalis* on, 512; Australia, 198; Belgium, 1706; France, 1422, 1706, 3371; Germany (E.), 2284, 2532; Ireland, 1420; USA, 1421, 1701, 3320; breeding against, 1077; control, 198, 511, 787, 788, 1420, 1422, 1537j, 1706, 2108, 2285j, 2308q, 2308v, 2725b, 2726c, 3079c, 3320, 3373, 3374, 3565c; dodine ineffective against, 1701; effect of antibiotic activity of bacteria and fungi, 3608; of fungicides, 351a, 2725j; of kinetin and metabolites, 1699; of phloridzin, 1516; electron microscopy, 3372; factors affecting, 1700, 2725b, 3371, 3373; forecasting, 2532; hydrolytic activity in germinated spores, 2531b; hypersensitive reaction, 2531a; overwintering, 1421; resistance, 1700; respiratory enzymes, 2906; synergism of pyridinitrile with captan against, 2727e; var. react., 2727a, 3320.
 —, *Verticillium* on, Germany (E.), associated with bark disease, 2534.
 — virus diseases, Denmark, 1416, 2904, 2905; Advis. Leafl., 1073; effect of temp., 2523l; effect on growth, 1697; indexing, 2904; on *Chenopodium quinoa*, 5k; perpetuation in rootstocks, 2905; serology, 2523e; var. react., 2107.
 — witches' broom virus on apple, effect on seed, 2530.
 — Virginia crab decline virus on apple, separation from other viruses, 3368.

*Apricot (*Prunus armeniaca*), *Agrobacterium tumefaciens* on, Egypt, 344.
 — apoplexy, *Cytospora* causing and pathological changes in, 2124.
 —, apple chlorotic leaf spot virus on, 189.
 — diseases, control, 650.
 —, *Eutypa armeniaca* on, causing dieback, 799.
 —, *Gnomonia erythrostoma* on, USSR, 3392; Yugoslavia, 1432; control and factors affecting, 3392.
 — peripremniosis (physiological), 2124.
 —, plum pox virus on, serology, 2523d.
 —, ?*Podosphaera oxyacanthae* var. *tridactyla* on, control, 1433.
 —, ?*Pseudomonas* on, USSR, symptoms, 2529.
 — ring pox virus on apricot, 1431.
 —, *Sclerotinia fructicola* on, NSW, latent infection, 2728j.
 —, ?*Sclerotinia laxa* on, control, 1433; resistance, 2902a.
 *— stem pitting, NSW, 1088.
 —, *Verticillium* on, pathological changes, 2553.
 —, — *dahliae* on, evolution and symptoms, 1729.
 — virus disease, NSW, associated with xylem gumming, 2728j; USSR, causing deformation, serology, 2522q; transmission by grafting and mechanically, 2522r.
 — yellow spot virus on apricot, Czechoslovakia, 1428.
 Arabanase produced by *Corticium rolfsii*, 1274.
Arabis mosaic virus associated with strawberry latent ringspot virus on celery, 1858.
 — — —, CMI/AAB description, 3151.
 — — —, non-occurrence of tubular inclusion bodies in hosts, 3153.
 — — — on *Asparagus*, 633.
 — — — on currant, 2523f.
 — — — on fruit, 785.
 — — — on grapevine, 2282l.
 — — — on hop, 2725i.
 — — — on *Nicotiana rustica*, 76.
 — — — on plants, 2367.
 — — — on stone fruit, 3384.
 — — — on strawberry, 633, 3558d.
 ? — — — on tulip, 1870g, *3730c.
Arachis hypogaea, see Groundnut.
 Arasan as seed treatment for soybean, 2708.
 Arbutin, effect on resistance of pear to *Erwinia amylovora*, 1084.
Arceuthobium, *Wallothiella arceuthobii* parasitizing, life cycle, 687.
 — *americanum* on pine, 3037.
 — *campylopodum* f.sp. *abietinum* associated with *Cytospora abietis* on *Abies concolor* and *A. magnifica*, 1166.
 Arenarin, effect on potato virus X on *Gomphrena globosa*, 1756.
 Aretan against *Ceratocystis paradoxa* on sugarcane, 242; *Oospora pustulans* on potato, 1122; *Trichococonis padwickii* on rice, 1022.
 — 6, against *Glomerella tucumanensis* on sugarcane, 2982.
 — forte as seed treatment for rice, 1372.
Aristida, *Sorosporium consanguineum* on, USA, incompatibility, 1058.

GENERAL INDEX

Armillaria mellea, factors affecting rhizomorph development, 1285, 3652.
 —, hosts, 1157, 1794.
 — in soil, 3661.
 —, metabolism in relation to antagonists, 1286.
 — on apple, 1426.
 — on *Ceanothus velutinus*, 1677.
 — on coffee, 918.
 — on Coniferae, 3032.
 — on forest trees, 257a.
 — on pine, 662.
 — on raspberry, 2560.
 — on spruce, 585, 662, 2681.
 — on trees and shrubs, 1156.
 —, somatic nuclear division, 1303.
 —, study, 3142.
Arrhenatherum elatius virus, Germany (E.), causing blue dwarfing, 2008b.
 Arsenic, toxicity to crops, 985.
 — compounds against *Sclerotinia fructicola* on peach, 2922.
Arthrobotrys arthrobotryoides and *A. conoides* on *Elaphostrongylus panticola*, 348.
 — *drechsleri* in soil, 348.
 *Artichoke, Globe (*Cynara scolymus*), *Ascochyta cynarae* on, UK, 1389.
 — diseases, review, 3075.
 — latent virus on artichoke, Brazil, 1533.
 *—, *Leveillula taurica* on, UK, 1389.
 *— virus disease, Brazil, resemblance of particles to tobacco rattle virus, 1533.
Artocarpus communis, see Breadfruit.
 Arum lily, see *Zantedeschia ethiopica*.
Arundinaria, see Bamboo.
 3-arylkalkylic acids, substituted, against *Pyricularia oryzae* on rice, 653.
Ascochitinine, resistance of fungi and *Fusarium oxysporum* f.sp. *lycopersici* to, 1272.
Ascochyta arachidis on groundnut, 1228.
 — *clematina* on clematis, 1538g.
 *— *cocaina* on coconut, 2966.
 — *compositarum* on sunflower, 1105.
 *— *cynarae* on artichoke, 1389.
 — *fabae*, control, 930.
 *— *garryae* on *Garrya*, 1389.
 — *gossypii* on cotton, 1029.
 — *graminicola* on barley, grasses and wheat, 2410.
 — *lycopersici* on tomato, 2180.
 — *melonis* on cucumber, 629.
 — *phaseolorum*, amino acid composition, 1559.
 — on eggplant, 632.
 — *piniperda* on pine, 573.
 — *pinodella* on pea, 1201.
 — *pisi*, amino acid composition, 1559.
 *— on broad bean, 1320.
 — on pea, see Pea.
 — *rabiei* on *Cicer arietinum*, 1854, 3059.
 — *solani-tuberosi*, amino acid composition, 1559.
 — *tarda* on coffee, 918.
 — *trifolii*, amino acid composition, 1559.
 — on clover, 1059.
 Ascomyctes, evolution in, 332f.
Ascospora beijerinckii on plum, 212.
 Ash (*Fraxinus*), *Armillaria mellea* on, control, 1157.
 —, tobacco ringspot virus on, identifying and transmission by grafting and sap, 3083h.

Asomite against *Erysiphe cichoracearum* on squash, 1239.
Asparagus, *arabis* mosaic virus on, transmission by nematodes, 633.
 —, cucumber mosaic virus on, detecting, 309.
 —, *Fusarium oxysporum* f.sp. *apii* on, 422.
 —, —, — *asparagi* on, Netherlands, 1538.
 —, —, — *cubense* and f.sp. *medicaginis* on, 422.
 —, strawberry latent ringspot and tomato black ring viruses on, transmitted by nematodes, 633.
 — virus 1 on *Asparagus*, Germany (W.), properties and transmission, 1231.
 Aspen (*Populus* spp.) [see also Poplar], *Fomes ignarius* and *F. tremulae* on, USSR (Estonia), 1491.
 —, *Godronia cassandrae* f.sp. *beticola* on, Canada, pathogenicity, 858.
 —, *Hypoxyylon mammatum* on, Canada, 257d.
 —, — *pruinatum* on, inhibition by benzoic and salicylic acids, 271; physiology, 576.
 —, *Marssonina castanei* and *M. tremulae* on, Sardinia, 268.
 —, *Melampsora populnea* on, Finland, 2202.
 —, — *neofabreae* *populi* on, *N. malicorticis* distinct from, 1797.
 —, *Pollaccia radiosa* on, Canada, 257d.
 —, *Polyporus vulpinus* on, biology and resistance to sodium fluoride, 3039.
 *—, *Venturia populin* on, Canada (BC), 257f.
 Aspergillomarasmin B from *Gloeosporium olivarum*, 1744.
Aspergillus amstelodami, electron microscopy and life cycle, 3678.
 *— *anomalus* in soil, 1960.
 — *candidus* on barley, stored, 453, 1347, 2835a.
 — on cotton, 1664.
 — *clavatus* antibiotic, 355.
 — *conicus* on grain, 97.
 — *echinulatus* on grain, 97.
 — on maize, stored, 2843.
 — *fisheri* var. *glaber* on canned strawberry, 2936.
 — *flavipes* in soil, 2772.
 — *flavus*, electron microscopy, 332e.
 — in rhizosphere of groundnut, 609.
 — in soil, 2771, 3534.
 — on barley, stored, 1347.
 — on cotton, 1664; not associated with internal fluorescence, 3301.
 — on groundnut, see Groundnut.
 *— on lupin, 784.
 — on maize, stored, 2843.
 — on soybean, 3055.
 — on tomato, 1151.
 —, penetration of nutritive substances into cell, 673.
 —, protein contents, 3633.
 — *foetidus*, virus from, 3726b.
 — *fumigatus*, antagonism to *Verticillium albo-atrum* on tomato, 2180.
 — in soil, 1959, 2772.
 — on barley, stored, 1346, 1347, 2835a.
 — on cotton, 1664.
 —, protein contents, 3633.

GENERAL INDEX

Aspergillus] *giganteus* on birds, 3571.
 — *glaucus* on barley, 453, 1346.
 — — on sunflower, 1104.
 — *japonicus* on *Pennisetum typhoides*, 136.
 — *nidulans*, effect of antibiotics on growth, 3105.
 — — var. *echinulatus*, surface characteristics of conidia, 1997.
 — *niger*, cell wall proteins, 1956.
 — —, effect of different C sources on sugar composition of mycelium, 1954; of ozone on germination, 671; of sorbic acid derivatives, 1953.
 — —, factors affecting growth, 41, 3632.
 — — in rhizosphere of *Cicer arietinum*, 365.
 — — in soil, 1959, 1998.
 — —, isolating mutants, 2007.
 — —, nematicidal activity, 8.
 — — on cotton, 1664, 3298a.
 — — on groundnut, see Groundnut.
 * — — on lupin, 784.
 — — on mango, 527.
 * — — on orange, 1650.
 — — on *Pennisetum typhoides*, 136.
 * — — on plum, 2126.
 — — on sisal, 3318.
 — — on yam, 3552.
 — —, sporulation, 1955.
 — —, utilizing growth regulators, 1280.
 — — virus, transmission, 3725.
 — — str. A-15, producing calcium gluconate, 1279.
 — *ochraceus*, protein contents, 3633.
 — *oryzae* and *A. parasiticus*, electron microscopy, 332e.
 * — *parvulus* in soil, 1960.
 — *repens* and *A. restrictus* on grain, 97.
 — *ruber* on maize, stored, 2843.
 — *sclerotiorum*, microbial transformation of phenazines by, 373.
 — *sydowii* in soil, 3123.
 — *tamarii* on groundnut, 3742.
 — — on yam, 3552.
 — *terreus*, effect of ozone on germination, 671; of storage on oxidizing activity, 1923.
 — — in soil, 1959.
 — — on barley, stored, 1347, 2835a.
 — *ustus* in soil, 2772.
 — *versicolor* on barley, stored, 453.
 — — on grain, 97.
 — — on maize, stored, 2843.
 — *wentii* on cotton, 1664.
 — — on maize, stored, 2843.
Asperisporium caricae on papaw, control, 1740a.
Aspidosperma quebrachoblanco, *Fusarium scirpi* on, causing red stain, 860.
Aspor against *Polystigma rubrum* on plum, 517; *Sphaerotheca pannosa* var. *persicae* on peach, 1090.
 — 70 against *Venturia pirina*, 1082.
 — —, effect on *Cladosporium fulvum*, 3605.
Aster (*Callistephus chinensis*), *Alternaria* on, USA, pathogenicity, 330r.
 — clover phyllody on, mycoplasma-like bodies in, 2388.
 — damping-off, 960.
 —, *Fusarium oxysporum* on, morphological characters, 66.
 — — — f.sp. *callistephi* on, 1684.

[Aster] phyllody virus, transmission by vectors, 2496.
 —, tobacco rattle virus on, hosts, particles, transmission by soil and vectors, 3321.
 — yellows in Rumania, hosts, 981.
 — —, ?mycoplasma causing, 2385, 2386, 3727.
 — — on barley, 2387.
 — — on *Erigeron canadensis*, 1314.
 — — on *Gladiolus*, 2727t.
 — — on *Nicotiana rustica*, 5c.
 * — — on oats, 3752.
 * — — on potato, 2972.
 — — on *Vinca rosea*, 354, 712.
 — — str. on aster, effect of achromycin and aureomycin, and transmission by vectors, 2024.
 — — str. on celery, 2024.
 — — — on *Plantago major*, 2024.
Asterina manihotis on cassava, 3562i.
Atamosco, *Curvularia* can infect, 919a.
Atrazine degraded by soil fungi, 2772.
 —, effect on *Fusarium oxysporum* f.sp. *vasinfectum*, 1918; maize dwarf mosaic virus on maize, 125, 2451.
Aulacorthum solani transmitting soybean dwarf virus, 1220.
Aureobasidium pullulans, effect on *Armillaria mellea*, 1677.
 — — on barley, stored, 1346.
 — — on *Cochliobolus sativus*, 3222a.
 — — on plum, 800.
 — — on timber, 590, 880.
 — —, production of enzymes, 953.
Aureofungin against *Alternaria alternata* on tomato, 2650; *Fusarium oxysporum* f.sp. *lycopersici*, 2183; as seed treatment for citrus, 3285.
Aureomycin against maize stunt disease, 1247a; sugarcane white-leaf disease, 832.
 —, effect on aster yellows on aster, celery and *Plantago major*, 2024; on *Vinca rosea*, 354; on stolbur on *Capsicum*, tobacco and tomato, 354.
Avena, see Oats.
Avocado Pear (*Persea americana*), *Diplodia* on, 331a.
 — — — *natalensis* on, penetration, 3406.
 — — — *Phytophthora cinnamomi* on, effect of soil amendments, 218.
 — — — *Sphaceloma perseae* on, Argentina, 2140.
 — — sunblotch virus on avocado pear, NSW, legislation against, 2728l.
Azadirachta indica, *Pseudomonas azadirachiae* on, India, epidemiology, 1790.
Azalea (see also *Rhododendron*), *Botrytis cinerea* on, biology, 2727i.
 * — *Cylindrocladium scoparium* on, Denmark, 3081.
 —, *Exobasidium azaleae* on, biological control, 2727j.
 — fungus diseases, effect of fungicides, 2727h.
 6-azauracil, effect on *Colletotrichum lindemuthianum*, 2316; *Pythium debaryanum* on cucumber, 3068.
Azepines, new class of fungicides, 2308s.
Azinphosethyl, effect on winter necrosis of peach, 3391.
Azotobacter chroococcum as seed treatment for cabbage, 885.

GENERAL INDEX

Bacillus cereus and *B. megaterium*, effect on *Venturia inaequalis*, 3608.
 — *subtilis* against *Fusarium roseum* f.sp. *dianthi* on carnation, 3327.
 — —, antibiotic activity of basidiomycetes against, 3607b.
 — — bacteriophage, 925.
 — — causing cotton boll-rot, 2077.
 — —, *Glomerella cingulata* not antagonistic to, 658.
 — —, inhibiting *Fusarium oxysporum* f.sp. *cumini*, 818; *Venturia inaequalis*, 3608.
 Bacteria, effect on *Venturia inaequalis*, 3608.
 —, fungi and mistletoes, BC, Canada, checklist and host index, 686.
 — in air, apparatus for studying survival, 974.
 — in cotton roots, effect on *Fusarium oxysporum* f.sp. *vasinfectum*, 2873.
 —, phytopathogenic, effect of fungicides, 2303; of 2-(thiocyanomethylthio) benzothiazole, 2727u.
 — —, properties counteracting phenols in host plants, 3578.
 Bacteriophages, replication cycle of RNA, 3149a.
 Bamboo (*Arundinaria*), *Schizophyllum commune* on, Indonesia, resistance, 2210.
 Banana (*Musa* spp.) bacterial disease, Colombia, causing watery rot of pseudostem, 1440.
 —, *Botryodiplodia theobromae* on, control, 1100.
 — bunchy top virus abaca and banana strs. on banana, S. Vietnam, 217.
 —, *Ceratocystis paradoxa* on, control, 1100.
 —, *Colletotrichum musae* on, Jamaica, 2563; Taiwan, 1101; control, 523, 803, 1100, 1101, 1736, 1737, 2136, 2563; effect of TBZ with banana latex, 1439.
 —, *Cordana musae* on, W. Samoa, effect of misting oil, 3402.
 —, *Corynespora cassiicola* on, Honduras & USA, 919c.
 —, *Deightoniella torulosa*, utilization of carbohydrates, 1933.
 —, *Diplodia* can infect, 2121.
 — diseases, Ghana, 88; S.E. Asia, 2287; Taiwan, causing post harvest decay, 3403.
 —, *Erwinia carotovora* on, Colombia, 2564; new form, 1739.
 — fruit decay, control, 1738.
 —, *Fusarium oxysporum* on, different from *F. o.* f.sp. *cubense*, 522.
 — — f.sp. *cubense* on, S. Tomé, factors affecting, 1099; gel induction and plasticizing of cell walls, 1098; phenols in cells in relation to, 2134; var. react., 1099.
 — — *roseum* on, Jamaica, 2563.
 —, *Gibberella fujikuroi* on, effect of TBZ with banana latex, 1439.
 —, *Macrophoma musarum* on, Taiwan, 1097.
 —, magnesium deficiency in, NSW, 525.
 — mosaic disease, India, symptoms and relationships, 3399.
 —, *Mycosphaerella fijiensis* on, Fiji, 2400, 2937; Java, 2390c; Pacific, 2400, 2562, 2938; W. Samoa, 3402; control, 3402; in relation to oil sprays against *M. musicola*, 2400.

[Banana, *Mycosphaerella*] *minima* and *M. musae* on, 521.
 — — *musicola* on, 521; Brunei, 2392; Gilbert & Ellice Islands, 2390b; Honduras, 3401; Pacific, 2937, 2938; Windward Islands, 3400; effect of benomyl, 804; epidemiology, 3401; factors affecting, 3400, 3401; mineral oil ineffective against, 3400; morphology of conidial state, 2938; survey, 2562; symptoms, 2390b.
 —, *Nigrospora musae* on, NSW, 2728k.
 — — *sphaerica* on, control, 803.
 *, *Phylachora musicola* on, Philippines, geographical distribution, 524.
 — post harvest decay, Australia, 3404.
 —, *Pseudomonas solanacearum* on, C. & S. America, 2735; Philippines, 3579; comparative study of str., 2735; control, 805; hosts, 3579; physiologic races, 2735; transmission by vectors, 2735; virulence, 3579.
 —, *Pyricularia grisea* on, 1643; sources of inoculum, 2135.
 —, *Rhizopus stolonifer* on, pathogenicity, 2939.
 Barium polysulphide against *Fusicoccum amygdali* on almond, 2125.
 Barley (*Hordeum*), *Alternaria* on, effect of fungicides, 3225.
 — — *alternata* on, India, damage, 3226.
 — — on seed, control, 452.
 —, antifungal activity of hordatines, 3228.
 —, *Ascochyta graminicola* on, UK, 2410.
 —, *Aspergillus*, *A. candidus*, *A. glaucus* and *A. versicolor* on, factors affecting, 453.
 —, aster yellows on, transmission by vectors, 2387.
 —, bromo mosaic virus on, 1566; effect of chemicals on multiplication, 3692; incorporation of uridine into infected leaves, 77, 976, 3722; non-transmission by seed, 2285g; virus induced RNA polymerase and synthesis, 3217.
 — brown flecks, *?Physoderma* causing and transmission ?by seed, 2442.
 —, *Calonectria nivalis* on, Denmark, incidence, 1340.
 —, *Cercospora herpotrichoides* on, effect on yield, 2441; hyphal and nuclear fusion of isolates, 2425; var. react., 2441, 3078a.
 —, cereal bullet-shaped virus on, transmission by vectors, 1581.
 —, *Claviceps purpurea* on, effect of guttation fluid on growth *in vitro*, 123.
 —, *Cochliobolus sativus* on, Denmark, 1340; Germany (E.), 735; Philippines, 3223; USSR, 736; control, 452, 2834, 3223; effect of fungicides, 3225; effect on yield, 2834; factors affecting, 735; interactions with saprophytes, 3222a, b; morphology of conidia, 3224; symptoms, 3223; var. react., 735, 736.
 — diseases, 3556b; Colombia, 2435; Denmark, 914; NSW, 986; control, 2435; effect of benomyl, 2307d.
 —, *Erysiphe graminis* on, 2895; Denmark, 449; Germany (E.), 2284; Israel, 2832; Netherlands, 451; Poland, 3778; biology, 2c; breeding against, 3556c; brown patches on leaves in relation to, 450; control, 733, 1618, 2307e, f; effect of systemic fungicides, 3556h; effect on growth, 1619; on respiration, 2036; on transpiration, 115;

GENERAL INDEX

electron microscopy, 734; factors affecting, 2307f, 2832; genetics of resistance, 2833; host-parasite relations, 2832; investigating, 3556h; oversummering, 2832; peroxidase activity, 3213; physiologic races, 2438, 3757, 3778; physiology, 2439; resistance, 2439, 3221; review, 451; source of infection, 2307g; spread, 449; symptom expression, 2409; var. react., 2440, 3078a, 3778.

[Barley], factors affecting, 3191.

— frost injury, NSW, 986.

— fungi in rhizosphere, USSR, 1961.

—, — on stored, UK, 1347; ecology, 2835a; effect of formic acid, 1347; isolating, 2835b.

—, *Fusarium* on, Denmark, 914, 1340; factors affecting, 453, 3215.

—, — *avenaceum*, *F. poae* and *Gibberella zae* on, Denmark, 1340.

—, *Helminthosporium* on, Denmark, 914, 1340; factors affecting, 3215.

—, manganese deficiency in, var. react., 3190.

— mosaic virus disease, India, symptoms, 446.

—, *Myrothecium commune* in rhizosphere, 1962.

—, oats sterile dwarf virus can infect, 3229.

—, *Ophiobolus graminis* on, 1585; association of nematodes, 2307n; effect on yield, 635f; enzyme production, 3758a, b.

—, *Penicillium* on, factors affecting, 453.

—, *?Physoderma* on, causing brown flecks, hosts, 2442.

—, *Puccinia* on, Denmark, spread, 449; var. react., 3078a.

—, — *coronata* on, Iran, identification, 988.

—, — *graminis* on, Canada, 3189; Iran, 988; identification, 988; var. react., 1003.

—, — *hordei* on, England, 2405; Iran, 988; genetics of reaction, 3218; identification, 988; peroxidase activity, 3213; specialization, 448; ultrastructure of haustoria, 937.

—, — *recondita* on, Iran, identification, 988.

—, — *striiformis* on, England, 2405; Iran, 988; factors affecting, 2405; genetics, 112; identification, 988; var. react., 1004.

—, *Pyrenophora graminea* on, Rumania, control, 1342; USSR, 2046; effect on glycolic acid-oxidase activity, 1006; on leaf pigments, 1005.

—, — *teres* on, UK, 116; W. Australia, cultural characters, 1620; effect on yield, 1341; genetics of resistance, 1007a, b; infection from barley debris, 116; spore forms, 1620; var. react., 116.

—, *Rhynchosporium secalis* on, Ethiopia, 918; UK, 116; breeding against, 3556c; infection from barley debris, 116; infection processes, 3227; investigating, 3556h; var. react., 1008, 3078a.

— seed diseases, control and factors affecting germination, 3755.

— treatment, Denmark, 914.

—, *Selenophoma donacis* on, Scotland, 1870a.

—, *Setaria* mosaic virus on, symptoms, 5i.

— storage disorders, 1346, 1347, 2835a, b.

—, *Streptomyces* on seed, 452.

— stripe mosaic virus on barley, *Denmark, 3081; causing sterility interaction between vars., 2433; physiological effects, 447, 1002; study, 2434.

[Barley stripe mosaic virus] on wheat, 3192.

—, *Tilletia panicicci* on, partial infection and penetration, 1343.

—, *Typhula incarnata* on, Scotland, 1870a.

—, *Uromyces iranensis* on, Iran, identification, 988.

—, *Ustilago hordei* on, C requirements, 2045; control, 1344, 1583; effect of irradiation, 3777; genetics, 113; pathway of infection, 2437; var. react., 113.

—, — *nigra* on, USSR, control, 3220; effect of irradiation, 3777; genetics, 113; var. react., 113, 3220.

—, *Ustilago nuda* on, Germany (E), 2284; India, 732; control, 989, 1345, 2308d, 2408; determining resistance, 3219; embryo test, 1322; genetics, 114; var. react., 732, 1582a, 3078a.

— virus A, hosts and provisional name, 3776.

—, wheat streak mosaic virus on, isolating and purifying, 3216.

—, '— variegation' disease on, 5h.

— yellow dwarf virus, epidemiology, 3077k.

—, —, — Norway, 424.

—, —, — on barley, composition and metabolism of infected leaves, 1338; differentiation of isolates by vector specificity, 1339; factors affecting, 1339; genetics, 1617, 2431a, b, c; transmission by vectors, 1339, 2431a, b; var. react., 3078a.

—, —, — on cereals, 2307b, 2808, 2809.

—, —, — on oats, 74, 118, 1339.

—, —, — on wheat, 3078a.

—, —, — MAV and RPV str. on oats, 2432.

BAS 3050F against basidiomycetes, 2308p.

—, —, effect on *Corticium rolfsii*, *C. solani* and *Typhula incarnata*, 2727n.

Basamid as soil treatment, 1167.

Basidiomycete, low temp., factors affecting protein protease and RNA-ase, 324k.

Basidiomycetes, antibacterial activity, 3607b.

—, control, 2308p, 2727m.

—, cultural characters, 3607a.

—, effect of extracts on plant viruses, 3697.

Basil, see *Ocimum basilicum*.

Basofix BM 117 against banana diseases, 1100.

**Bauhinia purpurea*, *Cercospora bauhiniae* on, India, 715.

Bayer 5191 against *Cephaeluros parasiticus* and *Corticium invisum* on tea, 2628.

— 22555 as soil treatment, 2307v.

— products against rice diseases, 3798.

Bay Laurel, see *Laurus nobilis*.

*Bean, broad (*Vicia faba*), *Agrobacterium tumefaciens* on, factors affecting tumour formation, 3587.

—, —, *Ascochyta pisi* on, Iran, 1320.

—, —, ?bean leaf roll virus on, Spain, classification and distribution, 1836.

—, —, — yellow mosaic virus on, effect of time of infection on yield, 900; non-transmission to lucerne, 1062; transmission by vectors, 1062.

—, —, *Cochliobolus spicifer* on, Sudan effect on, 3052.

—, —, cucumber mosaic virus str. can infect, 1478.

—, —, fungi in rhizosphere, effect of seed and root exudates, 379.

GENERAL INDEX

[Bean, broad], *Fusarium culorum* on, effect of diquat, 923.
 —, —, mottle virus on broad bean, products of UTP-3H incorporation, 3722.
 —, —, pea enation mosaic virus on, Czechoslovakia, hosts and properties, 292; transmission mechanically, 292; by vectors, 292, 601, 1199, 2226.
 —, —, *Pleospora herbarum* on, Bulgaria, 1412.
 *—, —, *Pseudomonas fabae* on, USSR, 302.
 —, —, *fluorescens* and *P. syringae* on, USSR, 303.
 —, —, red clover mottle virus on, effect of temp., 416.
 —, —, stain virus on Leguminosae, 3691.
 —, —, *Trichoderma viride* on, effect of diquat, 923.
 —, —, virus diseases, review, 1518.
 —, —, wilt, 3077m.
 —, —, virus on *Capsicum*, 3547.
 Bean, French and runner (*Phaseolus* spp.), *Agrobacterium tumefaciens* on, electron microscopy, 301; factors affecting tumour formation, 3588.
 —, alfalfa mosaic virus on, effect of victorin, 3634; infectivity and stability, 3173.
 —, *Alternaria* on, induced resistance, 1212.
 —, — *alternata* on, epidemiology and symptomatology, 1210; growth and nutrition, 3525; host-parasite relations, 1211; physiology, 331i; production of tentoxin, 2761.
 —, — *zinniae* on, factors affecting, 3050.
 —, apical chlorosis, heritable abnormality, 1217.
 —, beet curly top virus on, USA, resistance, 2227.
 —, brome mosaic virus on, 1566.
 —, bronzing, Canada, 2703.
 —, citrus crinkly leaf virus can infect, 330c.
 —, — infectious variegation virus on, localization in, 3724.
 —, *Cochliobolus carbonum* on, induced resistance, 1212.
 —, *Colletotrichum lindemuthianum* on, Kenya, 637c; biochemical changes, 2231; factors affecting, 3522; induced resistance, 1212.
 —, common mosaic virus on bean, Mexico, 5o; USA, 2227; electron microscopy, 2698; leaves as source of infection for vectors, 296; new str., 5o; resistance, 2227; var. react., 5o, 2227.
 —, —, — on Leguminosae, 3691.
 —, —, —, preservation of infectivity, 409.
 —, —, — Mexican str., 1843.
 —, *Corticium rolfsii* on, factors affecting, 2700.
 —, — *solani* on, Poland, 1214; control, 3600; phaseolin from, 2232; producing sclerotia, 2006; screening for resistance, 2233.
 —, cowpea mosaic virus on, effect of actinomycin D, 3157.
 —, *Desmodium paniculatum* virus can infect, 3084e.
 —, *Erysiphe* on, Americas, review of world distribution, 1845.
 —, — *polyphaga* on, France and Portugal, 1845.
 [Bean], fungi in rhizosphere, 3520; quantitative study, 47.
 —, *Fusarium* on, Poland, 1214.
 —, — *solani* f.sp. *phaseoli* on, factors affecting, 1213; genetics, 1844; histopathology, 3521.
 —, groundnut latent and groundnut mottle viruses can infect, 2286a, b.
 —, — stunt virus on, USA, source of infection, 2228.
 —, *Isariopsis griseola* on, 326; Malaysia, study, 2805.
 — leaf-rolling, heritable abnormality, 1217.
 — leaf roll virus on bean, genetics of resistance, 3556g.
 ?— — — on broad bean, 1836.
 —, lucerne virus on, 1410.
 —, *Microsphaera diffusa* on, Americas, 1845.
 — mosaic virus disease, France, new, transmission by sap and vectors, 910i.
 — — — on cowpea and *Nicotiana glutinosa*, 910i.
 *— mottling virus on bean, France, properties and transmission mechanically, 3518.
 —, pea enation mosaic virus can infect, 292.
 —, — mosaic virus on, 599b; genetics of resistance, 3556g.
 —, *Phytophthora* on, USA, 299.
 — pod mottle virus, conversion of electrophoretic forms, 605.
 — — — on bean, effect of actinomycin D, 3157.
 — — — on soybean, 1847, 3053, 3084h.
 — — — + soybean mosaic virus on soybean, 1218, 3529.
 —, potato paracrinkle virus on, bioassay host, 3442.
 —, *Pseudomonas* on, properties counteracting phenols in, 3578.
 —, — *flaccumfaciens* on, effect of irrigation, 1517.
 —, — *phaseolicola* on, Kenya, 637c; associated with *Uromyces appendiculatus*, 899; effect of irrigation, 1517; factors affecting transmission, 2234; passage through sheep, 1846; phytotoxic polysaccharide, 1216.
 —, — + *Uromyces appendiculatus* on, interaction, 324z.
 —, — *syringae* on, colonization and movement, 3526.
 —, *Pythium aphanidermatum* on, control, 1900.
 —, — *butleri* on, USA, 299.
 —, — *debaryanum* on, epidemiology, 297; host-parasite relations, 1215; symptoms, 297.
 —, — *myriotylum* on, factors affecting and virulence, 298.
 —, red clover mottle virus on, effect of temp., 416.
 —, *Sclerotinia sclerotiorum* on, fungicides against, 3524.
 — seed diseases, control and factors affecting germination, 3755.
 — seedling wilt, heritable abnormality, 1217.
 — southern mosaic virus, aggregates, 2371.
 — — —, effect of extracts from basidiomycetes, 3697.

GENERAL INDEX

[Bean southern mosaic virus], electron microscopy, 2371.
 — — — in soil, 1308.
 — — — on bean, effect on nucleotides, 3517.
 — — — — cowpea str. on bean, transmission by vectors, 2243.
 — — — — on cowpea, 3056.
 —, soybean mosaic virus can infect, 3528.
 —, *Sphaerotheca fuliginea* on, Far East, 1845.
 — 'summer death', NSW, 2728h.
 —, *Thielaviopsis basicola* on, effect of soil amendments, 1972; histopathology, 3521.
 —, tobacco mosaic virus on, biochemical study of local lesion formation, 398; effect of sonicated virus and virus protein, 1310; of victorin, 3634; effect on isozyme pattern and peroxidase activity, 2370; ethylene production by leaves, 3159; inhibition by RNase, 1309, 3708; inhibitor from, 2020; RNA infectivity, 3706.
 —, — — — bean str. on, electron microscopy, 1204.
 —, — — — necrosis virus on, effect of nutrition, 1515; electron and light microscopy of cells, 3161; inhibition, 2020.
 —, — — — +satellite virus, electron and light microscopy, 3161.
 —, — — — D virus on, effect on isozyme pattern and peroxidase activity, 2370.
 —, — — — rattle virus can infect, 3321.
 —, — — — ringspot virus in roots, electron microscopy, 3519.
 —, — — — streak virus on, component ratios, 3166.
 —, transport of benomyl in, 2699.
 —, *Uromyces appendiculatus* on, 1208; Brazil, 3049; Singapore, 3134; associated with *Pseudomonas phaseolicola*, 899; control, 3565e; effect of 5-fluorouracil on nucleic acid metabolism, 1207; of phloridzin, 1516; factors affecting, 1209; pathogenesis, 2229; physiologic races, 3049; polysaccharide synthesis in leaves, 2230; starch accumulation and depletion, 1205, 1206; template RNA in resting uredospores, 3523; var. react., 1209.
 — virus, effect of extracts from basidiomycetes, 3697.
 — — — disease, USA, 1247j.
 *—, *Xanthomonas phaseoli* on, *Chile, 3051; USSR, 300; effect of irrigation, 1517; electron microscopy of bacteriophage, 2701; factors affecting, 300, 3095; nutrition, 2702.
 — yellow mosaic virus on bean, 599b; electron microscopy, 2698.
 — — — — on broad bean, 900, 1062.
 — — — — on *Cicer arietinum*, 1519.
 — — — — on clover, 179c, 2897.
 — — — — on *Gladiolus*, 2088.
 — — — — on Leguminosae, 3691.
 — — — — on lucerne, 1063.
 — — — — on pea, 599b.
 — — — — preservation of infectivity, 409.
 —, velvet, see *Mucuna deeringiana*.
 Beaudice, effect on yield and quality of beet, 1828.
Beauveria bassiana against *Carpocapsa pomonella*, 2304; *Epilachna vigintioctomaculata*, 1546; *Sitonia lineatus*, 2282i, 3591.
 — — — insecticidal substance from, 3097.
 — — — on *Ocneria dispar*, USSR, 346.
 — — — survival of spores in soil, 2304.
 — — — toxins inhibiting maize growth, 644.
 — *tenella* against *Epilachna vigintioctomaculata*, 1546.
 — — — on *Ocneria dispar*, USSR, 346.
 Beech (*Fagus*) bark disease, Denmark, UK and USA, 2189e; associated with *Coccus* and *Nectria*, 2189e.
 Beet (*Beta vulgaris*). *Alternaria* on, 3508n.
 —, — *alternata* on, *India, 891; USSR, control and var. react., 2225.
 *—, — *brassicae* on, India, 891.
 —, *Aphanomyces* on, effect of carbamoyl-oxim and dexon, 1196.
 —, — *cochlioides* on, USSR, causing black leg, 3508l.
 — black leg, USSR, 2224, 2225, 3508l; control, 1511, 1833, 2224, 2225, 3508l; factors affecting, 2224, 3508m; var. react., 1834, 2225.
 —, *Cercospora beticola* on, Hungary, 3508o; Poland, 323; Rumania, 3513; USSR, 3508b; Yugoslavia, 3508g; biotypes, 3508o; breeding against, 1510, 3508b; control, 1828, 1830, 1831, 1832, 3508d, e, s, 3513, 3593g; effect of leaf phenols, 1194; enzyme activity in relation to resistance, 2222; factors affecting, 3513; susceptibility of wild spp., 1829; var. react., 2695, 3508e, o.
 —, — — +beet yellows virus on, synergism between, 595.
 —, *Colletotrichum spinaciae* on, causing post-emergence damping-off, eradication and hosts, 3555g.
 —, *Corticium rolfsii* on, India, 3423; Sardinia, control, 289, 290; factors affecting, 289.
 —, — *solani* on, Sardinia, 289, 290; Yugoslavia, 3508g; control, 289, 290, 3508h; factors affecting, 289.
 —, *Corynebacterium beticola* on, Germany (N.), 1197.
 — curly top virus on bean, 2227.
 — — — — on beet, genetics, 1192.
 — — — — on tomato, 1146, 1783.
 — — — — str. on beet, differentiation, hosts and isolation, 3512.
 — diseases, Poland, 3508f, r; USA, 2221; USSR, 3046; apparatus for seed treatment, 1574; assessing losses, 3508f; breeding against, 3556a; control, 3508r; factors affecting, 2221; forecasting, 3046; Russian book on, 3507.
 —, *Erysiphe betae* on, Germany, 890; *India, 1827; USSR, 3508b; breeding against, 3508b, 3556e; factors affecting, 597b, 890; morphology and taxonomy, 597a; sporadic germination of ascospores, 2223.
 —, — *polygoni* on, forecasting, 1509.
 —, fungi on, 1835; Poland, control, 291; interactions with viruses, 596, 3045; list in sugar beet glossary, 3506.
 —, *Fusarium* on, 3508n; Belgium, 1504; USSR, 2224, 2225, 3508l; causing black leg, 3508l; control, 2224, 2225, 3508l; factors affecting, 2224; var. react., 2225.

GENERAL INDEX

[Beet] Kräuselkrankheit virus on beet, Germany (E.), 2284.
 — magnesium deficiency, USSR, 288.
 — mild yellowing virus on beet, epidemiology, 1507; interaction with fungal diseases, 3045.
 — mosaic virus on beet, Poland, 1537e; USA, 3510; biochemical changes in leaf components, 1537e; dispersal, 3510; factors affecting yield, 1189; nuclear inclusions, 3511; purification, 593.
 — — — on *Chenopodium quinoa*, 593.
 — — — on *Gomphrena globosa*, 405, 406.
 — — —, transmission mechanically, 3508k; by vectors, 3699.
 — — — str. on beet, Denmark, 322.
 *—, *Peronospora farinosa* on, *Iran, 1320; UK, 3077p; USSR, 889; Yugoslavia, 3508a; assessing infection, 1193; breeding against, 3556e; effect on sugar content and yield, 3508q; screening for resistance, 635c; var. react., 889, 3508a, p.
 — — — f.sp. *betae* on, 596.
 —, *Pleospora bjoerlingii* on, 3508n; USSR, 3508l; Yugoslavia, 3508g; causing black leg, 3508l; colonization by, 892; control, 3508h, l.
 —, *Polomyxa betae* on, Italy, 3508i; USSR, 288; electron microscopy, 1195.
 *—, *Pythium aphanidermatum* on, USA (Ariz.), 2029.
 —, — *debaryanum* on, Germany (E.), 2284; USSR, causing black leg, control, 3508l.
 —, — *irregulare* on, Poland, 3508c; USSR, 288; control, 3508h; factors affecting, 3508c.
 —, *Ramularia beticola* on, UK, 3077p; breeding against, 3556e.
 — rhizomania, Italy, caused by *Polomyxa betae*+beet virus A, 3508i.
 — ring spot virus, variant of tomato black ring virus, 2f.
 — seedling diseases, UK, 3077p.
 —, *Uromyces betae* on, breeding against, 3556e.
 —, *Verticillium* on, Netherlands, 1538j.
 — virus diseases, USA (Ariz.), factors affecting, 1505; list in sugar beet glossary, 3506; specific interactions with fungus diseases, 596.
 — viruses A and B in beet, Italy, 3508i.
 — western yellows virus on beet, USA, 3044; membrane feeding in determining properties, 1191; selecting for resistance, 887, 888.
 — — —+beet yellows viruses on beet, USA, 1506.
 — yellows virus, CMI/AAB description, 3151.
 — — —, epidemiology, 2f.
 — — —, lyophilization of antisera, 2793.
 — — — on beet, Belgium, 1504; UK, 3077p; USA, 3044, 3510; USSR, 288; Yugoslavia, 3508a, g; control, 1826, 3077p; dispersal, 3510; effect of K on metabolism, 1190, 1508; epidemiology, 1507; epiphytotes, 3508a; factors affecting, 1189, 3556e; fructose causing protein dispersion, 2282e; inhibition by leaf sap, 3508j; interaction with fungal diseases, 3045; selecting for resistance, 887, 888; serological determination, 1825; var. react., 3556e.
 [Beet yellows virus] on *Chenopodium foliosum* and *C. quinoa*, 594.
 — — —, transmission by vectors, 3699.
 — — —+beet western yellows virus on beet, USA, 1506, 3044; factors affecting, 1506; incidence, 3044; var. react., 1506.
 — — —+*Cercospora beticola* on beet, synergism between, 595.
 — — — mild and severe stra. on beet, 3509.
 Beetles transmitting cowpea mosaic virus yellow str., 2286; plant viruses, 3149e.
Begonia, *Botrytis cinerea* on, acid production, 2727x.
 — diseases, Netherlands, 2085; control, 1547, 2085.
 —, *Erysiphe cichoracearum* on, Canada, 3322.
 —, — *polyphaga* on, Sweden, 3322.
 —, flower mottle virus on, Denmark, 322.
 —, — *Microsphaera* and *Oidium begoniae* on, UK, 3322.
 —, *Xanthomonas begoniae* on, Iran, 1393; Scotland, 1870e.
Belladonna mottle virus, effect of organic Hg compounds, 2282h, 3693.
 — — — on *Belladonna*, transmission by vectors, 2282f.
 — — — on *Datura stramonium*, *Nicotiana glutinosa* and tobacco, 707.
 — — —, ultrastructure, 2282f.
Bemisia tabaci transmitting cassava mosaic virus, 2262; cotton leaf curl virus, 3300; papaw leaf curl disease, 1740b; tomato yellow leaf curl virus; 3704; *Xanthomonas phaseoli*, 305.
 Benlate against carnation wilt diseases, 1673; *Cercospora herpotrichoides* on wheat, 3210; *Colletotrichum musae*, 523, 1736, 1737; *Erysiphe cichoracearum* on cucumber, 1239; *Exobasidium vexans*, 2170e; *Fusarium oxysporum* on tulip, 2893; *Glomerella cingulata* on coffee, 2863a; *G. tucumanensis* on sugarcane, 3466; *Guignardia citricarpa* on citrus, 2075; papaw diseases, 3410; *Penicillium digitatum* and *P. italicum* on orange, 2861; *Phymatotrichum omnivorum* on cotton, 3311a; *Pyricularia oryzae*, 3792b; *Scirrhia pini* on pine, 2286m; *Septoria apicola*, 3540, 3555e; *Sphaerotheca pannosa* on rose, 2891; *Ustilago nuda* on wheat, 443; *Venturia inaequalis*, 198; *Verticillium dahliae* on cotton, 2867; on strawberry, 2932; as seed treatment for cotton, 1040, 2867; pea, 3555f; rice, 3792b; wheat, 3210; as soil treatment, 2183, 2867, 2886, 3210.
 —, effect on *Aspergillus*, 3603; of heated and unheated on *Penicillium expansum* on apple, 203.
 — versus melprex, 198.
 — 50W against *Sclerotinia sclerotiorum* and *Verticillium alboatum* on chrysanthemum, 2087.
 —, see also Benomyl.
 Benomyl against *Blumeriella jaapii* on cherry, 2105; *Botryodiplodia theobromae* on banana, 1100; *Botrytis cinerea*, 1269; on lettuce, 1529; on strawberry, 2307u; *Ceratocystis paradoxa* on banana, 1100; *C. ulmi*, 2665; *Cercospora nicotianae* on tobacco, 1774a; *Colletotrichum musae*,

GENERAL INDEX

1100, 1101, 2136, 2563; *Corticium solani* on cotton, 2078; *Diplocarpon rosae*, 2890; *Diplodia natalensis* on citrus, 1025; *Erysiphe cichoracearum* on melon, 1524, 1531; on tobacco, 1774a; *E. polygoni* on cowpea, 3057; on cucumber, 1269; *Eutypa armeniaca* on apricot, 799; fruit tree diseases, 1268; fungi on flower bulbs, 2727v; *Fusarium*, 1268; *F. oxysporum* f.sp. *gladioli* on *Iris*, 2505; on *Gladiolus*, 3339; *F. o.* f.sp. *lycopersici*, 2182; *F. o.* f.sp. *narcissi* on *Narcissus*, 3343; *F. roseum* on banana, 2563; *Fusicoccum amygdali* on peach, 2923; *Gloeosporium* on fruit, 1268; *Glomerella cingulata* on *Bixa orellana*, 3422; on citrus, 1025; on coffee, 3290; *Guignardia citricarpa* on citrus, 1025; *Mycosphaerella brassicicola* on Brussels sprouts, 2218; *Nectria galligena* on apple, 2114; *Nigrospora musae* on banana, 2728k; *Oidium* on *Antirrhinum*, 2879; *Penicillium* on fruit, 1268; *P. digitatum* on citrus, 1025; on orange, 3283; *Pezicula alba* on apple, 2725d; *P. malicorticis* on apple, 515, 2725d; *Physalospora rhodina* on cotton, 2078; *Podosphaera leucotricha*, 199, 1422, 2105, 3374; *P. oxyacanthae* on cherry, 199; *P. oxyacanthae* var. *tridactyla* on apricot, 1433; powdery mildew on melon, 2718; *Pseudopeziza ribis* on currant, 2307q; *Rhizoctonia* in soil, 1268; *Rhododendron* diseases, 3347; *Sclerotinia* in soil, 1268; *S. fructicola* on apricot, 2728j; on peach, 2728j; 2922; *S. laxa* on apricot, 1433; *S. minor* on lettuce, 1529; *Sclerotium cepivorum* on garlic, 1524; soft fruit diseases, 2307t; *Sphaerotheca fuliginea* on cantaloupe, 626; on cucumber, 2263; *S. macularis* on strawberry, 2931; *S. pannosa* on rose, 2890; *Thielaviopsis* in soil, 1268; *T. basicola* on *Antirrhinum*, 2879; on tobacco, 2993, 2994; *Trichoseptoria fructigena* on apple, 515; *Uncinula necator*, 2144; *Ustilago striiformis* on *Poa pratensis*, 2097, 2098; *Venturia inaequalis*, 788, 1422, 1537j, 2108, 3374; *V. pirina*, 1422; *Verticillium*, 1268; as bulb treatment, 1538h; as seed treatment for cowpea, 3057; potato, 1754c; 2607; wheat, 107; as soil treatment, 107, 909i, 2042, 2105, 2162, 2176, 2263, 2266, 2308b, 2482, 2879, 3057, 3336, 3749.

[Benomyl], broad spectrum fungicide, 2307z.

—, effect on barley diseases, 2307d; *Botrytis fabae*, 2308n; *Colletotrichum musae*, 2314; *Drechslera poae* on *Poa pratensis*, 2098; *Gladiolus* corms, 3339; *Mycosphaerella musicola*, 804.

—, general characteristics, 1268.

—, ineffective against *Botryosphaeria corticis* on *Vaccinium corymbosum*, 2129; *Fusarium oxysporum* f.sp. *lycopersici* on tomato and watermelon, 3749; *Hemileia vastatrix*, 3290; *Sclerotinia squamosa* on onion, 1524.

—, popular review, 3596.

—, residues in banana, 1100.

—, toxicity to mushroom, 909i.

—, transport in bean, 2699.

—, new compound, 645a.

—, see also Benlate.

[Benomyl] 50W against *Thielaviopsis basicola* on bean, 1972.

Benzimidazole against *Septoria apicola*, 3540.

— ineffective against *Podosphaera leucotricha*, 199.

Benzimidazoles against potato tuber diseases, 2308a.

2-(2-furyl) benzimidazole, toxicity to apple and cherry, 199.

Benzoic acid as seed treatment for onion, 614.

Bercema-zineb 90 against *Phytophthora infestans* on potato, 2310.

Bermuda grass, see *Cynodon dactylon*.

Beryl 80 against *Botrytis cinerea* on strawberry, 802.

Beta vulgaris, see Beet.

Betel, see *Piper betle*.

Betula, see Birch.

Bilberry, see *Vaccinium myrtillus*.

Binapacyril against *Podosphaera leucotricha*, 3374.

Biotin, effect on *Verticillium dahliae*, 948; *Trichometasphaeria turcica*, 2462.

Biphenyl against citrus storage disorders, 3282.

—, effect on *Penicillium digitatum* on orange, 760.

—, ineffective against *Candida krusei* on lemon, 3282.

Bipolaris hadrotrichoides proposed new comb., 2787.

— *iris* on *Iris*, 909f.

Birch (*Betula*), *Conioiphora puteana* on, biology and resistance to sodium fluoride, 3039.

— dieback, USA, associated with seed production, 261.

— diseases, USA, survey, 2192.

—, *Fomes fomentarius* on, biology and resistance to sodium fluoride, 3039.

—, *Godronia cassandrae* f.sp. *beticola* and *G. fuliginosa* on, Canada, pathogenicity, 858.

—, *Melampsoridium betulinum* on, nomenclature, 3133.

—, *Melanconium betulinum* on, N. Ireland, imported from Netherlands, 2726e.

—, *Myxosporium devastans* on, 573.

—, *Polyporus glomeratus* on, mode of entry and canker formation, 259.

—, *Poria obliqua* on, mode of entry and canker formation, 259; phenolic compounds from extracts, 2193.

—, *Pseudopachidium ledi* on, Canada, 1497.

Birds, fungi on, dissemination and survival, 3571.

— transmitting *Puccinia coronata* and *Pyrenophora avenae* on oats, 3571.

1,2 Bis 3 methoxy-carbonyl-2-thioureido-benzene against *Fusicoccum amygdali* on peach, 2923.

Bixa orellana, *Glomerella cingulata* on, Malawi, 1874b, 3422.

Blackberry (*Rubus* spp.), cherry leaf roll virus on, 2725h.

— stunt, ?mycoplasma associated with, 3557j.

Blackcurrant, see Currant.

— reversion virus on currant and gooseberry, 2557.

GENERAL INDEX

Blasticidin against *Pyricularia oryzae* on rice, 327a.

— S, effect on *Pyricularia oryzae*, 3262a, b.

— — inhibiting ethylene production in tobacco with tobacco mosaic virus, 3159.

Blastin, effect on microflora in rhizosphere of *Eleusine coracana*, 3664.

Blastocladiella emersonii, microstructure, 6.

Blitane, new, against *Phytophthora palmivora* on cacao, 423.

Blitox against *Cephaeleros parasiticus* and *Corticium inustum* on tea, 2628.

Blueberry, see *Vaccinium*.

Blumeriella jaapii on cherry, see Cherry.

— — on stone fruit, 2921.

**Boehmeria nivea*, *Cephalosporium zonatum* on, Nigeria, 327e.

**Boerhaavia diffusa*, eggplant mosaic str. of cucumber mosaic virus on, India, transmission by vectors, 3073.

Boletus bovinus on spruce, forming mycorrhiza, effect on *Fomes annosus*, 3025.

— *elegans* on pine, forming mycorrhiza, 660.

— *granulatus* on pine, forming mycorrhiza, 660, 2747.

— *grevillei* and *B. luteus* on pine, forming mycorrhiza, 1911.

— *variegatus* on pine, forming mycorrhiza, 2747.

Books, Abstracts of microbiological methods, 2294; Advances in virus research, Vol. 15, 3149; Agricultural pesticides and their application, 1253; Biology of the Myxomycetes, 1294; British fungus flora, Agarics and Boleti: introduction, 2339; Classwork with fungi, 2nd ed., 340; Common tree diseases of British Columbia, 1153; Contribution to the systematic plant virology (Dan.), 3689; Deterioration and fungus disease of citrus and various other tropical fruits in storage (Fr.), 220; Diseases of kitchen garden plants (Ital.), 3040; Diseases of ornamental plants in Rumania (Rum.), 1669; Diseases of sugar beet (Russ.), 3507; Early warning manual for diseases and pests of potatoes, 2582; Forestry techniques against the root fungus (Russ.), 2678; Fundamentals of mycology, 1254; Fungal differentiation (Fr.), 3668; Fungi, Vol. IV. Phycomycetes, Peronosporales (Pol.), 2782; Fungi from agricultural soils (Germ.), 1957; Fungi of Czechoslovakia in their natural habitats (Czech.), 1884; Fungicides Vol. II. Chemistry and physiology, 2306; Fungicides for fruit and berry crops (Russ.), 1696; Grain storage, The role of fungi in quality loss, 638; Guide to coffee culture in Malawi, 1377; Guide to fungi of the Ukraine (Ukr.), Vol. 1, 1544; Vol. 2, 60; Guide for the mycological and bacteriological laboratory (Rum.), 2732; Guide to plant diseases, 2nd ed. (Russ.), 342; Handbook of mycology. I. Phycomycetes and Ascomycetes, 2nd ed., 2733; Handbook for phytosanitary inspectors in Africa, 3574; Harmful and useful fungi (Russ.), 2734; Indexing procedures for 15 virus diseases of citrus trees, 2067; Insecticide and fungicide handbook for crop protection, 15;

Introduction to plant diseases, 1257; Introduction to plant pathology (Span.), 1258; Investigations on plant tumours. Crown gall. On the biochemistry of tumour induction by *Agrobacterium tumefaciens*, 2300; Laboratory manual for general microbiology, 1256; Methods in microbiology, Vol. 1, 1887; Microbiological methods, 2nd ed., 3146; Microbiological presence and activity analyses of fungicide-treated soils (Germ.), 1958; Mycoflora of Azerbaijan Vol. 4. Peronosporales (Russ.), 2783; Mycological studies honouring John N. Couch, 1885; The Myxomycetes, 3145; Pests and diseases of tropical crops and their control (Engl. ed. of Germ.), 3575; Phytopathological practice (Germ.), 1259; Plant immunity. Biochemical aspects of plant resistance to parasitic fungi (Transl. of Russ ed.), 3089; Plant pathological methods. Fungi and bacteria, 1886; Plant pathology. Dictionary of Russian-English-German-French, 1540; Plant pathology (textbook), 339; Plant protection against pests and diseases in the collective garden (Russ.), 1543; Practical mycology. Manual for identification of fungi, 1255; Progress in industrial microbiology, Vols. 7, 8, 2293; Short history of botany in the US, 341; Treatise on agricultural phytopathology, Vol. 2 (Rum.), 1541; Use of pesticides and control of economic pests and diseases in Indonesia, 1319; Virus diseases of berries (Russ.), 3397; Virus diseases of potato and tomato in Kazakhstan (Russ.), 80; Viruses in plant hosts. Form, distribution and pathologic effects, 696; Viruses, vectors and vegetation, 2010; The yeasts. Vol. 1. Biology of yeasts, 1539.

Borax against boron deficiency in oil palm, 820; *Corticium solani* on potato, 237; as timber preservative, 1814.

—, effect on *Fomes annosus*, 1174.

Boric acid against boron deficiency in apple, 1716

Boron as seed treatment for tomato, 1149.

— deficiency in apple, 516, 1716; cotton, 1665; ?groundnut, 306b; lucerne, 2898; oil palm, 820; pea, 1842; pear, 516; ?*Pelargonium*, 3083d; pine, 1176; sugarcane, 2627.

—, effect on cellulose decomposition by fungi, 366; cork spot and mineral content of apple, 2539; cotton boll rot, 3298a; *Synchytrium endobioticum*, 1456; virus diseases of potato and tomato, 1305.

— toxicity in soybean, 3735b; sugarcane, 2627.

Botany, a short history in US, book on, 341.

Bothriochloa pertusa, effect of rhizosphere fungi, 48.

Botryodiplodia acerina and *B. fraxini* transferred to *Diplodia*, 1296.

— *hypoderma*, effect of C and N sources, 1987a, b.

*— *palmarum* on grapevine, 812.

— *theobromae*, cellulolytic enzymes, 1936.

—, effect of C and N sources, 1987a, b.

— on *Achras sapota*, 3639.

— on banana, 1100, 3403.

[*Botryodiplodia theobromae*] on cotton, 3298a.
 — on guava, 1743.
 — on *Litchi chinensis*, 669.
 — on mango, 3639.
 *— on orange, 1650.
 — on yam, 3552, 3553.
 —, protein synthesis during spore germination, 1938, 2754.
 —, pycnidium production, 32, 387, 1988.
 —, utilizing lactose, 668; oligosaccharides, 1937; polysaccharides, 2755.
 *— *tubericola* on sweet potato, 1320.
Botryosphaeria corticis on *Vaccinium corymbosum*, 1093, 2128, 2129.
 — *ribis*, effect of C and N sources, 1987a, b.
 — not causing *Acer saccharum* canker, 258.
 — on apple, 3370.
 — on *Rhododendron*, 3347.
 —, preserving cultures, 2359.
Botrytis allii, effect of ozone on germination, 671.
 — on onion, 902, 1538e, 1549.
 — *cinerea*, control, 1269, 1901.
 —, effect of CO_2 and O_2 , 1948; of fungicides, 353; of soil treatment, 2727l.
 —, electron microscopy of sclerotia, 2353.
 —, factors affecting spore germination, 3643.
 — in soil, 2312.
 —, morphological changes induced by antibiotics, 655.
 — on apple, 2534.
 — on azalea, 2727h, i.
 — on barley, stored, 1346.
 — on *Begonia*, 2085, 2727x.
 — on carrot, 1527.
 *— on *Cicer arietinum*, 610.
 — on grapevine, see *Grapevine*.
 — on hop, 1747.
 ?— on lentil, 3516.
 — on lettuce, 1529.
 ?— on pea, 3516.
 — on *Pelargonium*, 3345.
 — on pome fruit, 1707.
 — on potato, 241.
 — on raspberry, 1435.
 — on strawberry, see *Strawberry*.
 — on tomato, see *Tomato*.
 —, popular account, 421.
 —, producing citric acid, 664; proteolytic enzymes, 1939.
 — *fabae*, effect of benomyl and electron microscopy, 2308n.
 — *tulipae* in soil, 2330.
 — on flower bulbs, 2727v.
 — on tulip see *Tulip*.
 — +*Fusarium oxysporum* f.sp. *gladioli* on tulip, 178.
Bougainvillea, *Cercosporidium bougainvilleae* on, USA, 330p.
 —, *Phytophthora nicotianae* var. *parasitica* on, USA, 3084a.
Brachiaaria cruciformis and *B. ramosa*, *Uromyces setariae-italicae* on, India, 748.
Brachycaudus helichrysi associated with sunflower curl mosaic, 3427.
Brassica, *Alternaria brassicae* on, Singapore, 714.
 —, *Peronospora parasitica* on, control, 3555a; susceptibility of callus, 1821.
 [*Brassica*], *Plasmodiophora brassicae* on, W. Mediterranean, 2694; effect of quintozeno, 188; gene centre for resistance, 2694; var. react., 3078a.
 — *alba*, see *Mustard*.
 — *campestris* var. *oleifera*, see *Colza*.
 — var. *sarson*, see *Mustard*, Indian.
 — *chinensis*, turnip yellow mosaic virus on, concentration, 2214.
 — *junccea*, see *Mustard*, Chinese.
 — *napella*, see *Rape*, Chinese.
 — *napobrassicae*, see *Swede*.
 — *napus*, see *Turnip rape*.
 — var. *oleifera*, see *Rape*.
 — *nigra*, see *Mustard*.
 — *oleracea*, see *Broccoli*, Brussels sprouts, Cabbage, Cauliflower.
 — var. *acephala*, see *Kale*.
 — var. *caulo-rapa*, see *Kohlrabi*.
 — *pekinenses*, see *Cabbage*, Chinese.
 — *perviridis*, cauliflower mosaic virus on, effect on multiplication of turnip mosaic virus, 1820.
 —, turnip mosaic virus on, electron microscopy, 2268; inclusions, 2212; multiplication, 1820.
 — *rapa*, see *Turnip*.
Brassicol, see *Quintozeno*.
Breadfruit (*Artocarpus communis*), 'pingalap' disease, 2287.
 **Bremia lactucae* on *Helichrysum bracteatum*, 3738.
 — on lettuce, 1538x, 3555b.
 — on swede, 3078a.
Brestan against *Alternaria dauci* on carrot, 616; barley diseases, 2435; *Cercospora beticola*, 1831, 3508d, e, 3513; *Elsinoe ampelina* and *Phytophthora infestans*, 17; *Plenodomus destruens* on sweet potato, 3551; *Scirrhia pini* on pine, 1805b.
 —, effect on *Septoria apiicola* on celery, 3555e.
 — ineffective against *Gibberella fujikuroi*, *Pestalotia menezesiana* and *Phytophthora infestans*, 17.
 — 60 against *Cephaleuros parasiticus* and *Corticium invisum* on tea, 2628; *Phytophthora infestans* on potato, 1537l.
 — toxicity to banana, 1097.
Broccoli (*Brassica oleracea*), *Pythium debaryanum* can infect, 3061.
Brome (*Bromus*) mosaic virus, CMI/AAB description, 3151.
 —, USSR, ?associated with nematodes, hosts and transmission, 1566.
 — on barley, see *Barley*.
 — on maize, 2380.
 — on wheat, 992.
Bromus biebersteinii, *B. carinatus* and *B. inermis*, *Pyrenophora bromi* on, var. react., 1403.
 — *marginatus*, *Puccinia striiformis* on, USA, 1596.
 — *ornans*, *Pyrenophora bromi* on, 1403.
 — *sterilis*, *Tilletia panicicola* on, partial infection and penetration, 1343.
 — *tyttholepis*, *Pyrenophora bromi* on, 1403.
Bronopol as seed treatment for cotton, 761a.
Brunchorstia pini, conidial state of *Sclerotellus lagerbergii*, *Digitosporium piniphilum* compared with, 1808.

GENERAL INDEX

Brussels sprouts (*Brassica oleracea*), *Mycosphaerella brassicicola* on, USA, source of infection, 2218.

Bryonia dioica mosaic virus, characterization, 3555.

Bryophyllum pinnatum, *Glomerella cingulata* on, Sabah, 329f.

BSM 11 against *Ceratocystis paradoxa* on sugarcane, 242.

Buckwheat (*Fagopyrum esculentum*), *Macrophomina phaseoli* on, factors affecting, 1576.

— virus disease, USSR, transmitted by *Aphalaro polygonum* and sap, 2479.

Buddleia davidii, cucumber mosaic virus on, France, 3323.

— *nivea*, cucumber mosaic virus on, Rumania, 771.

Busan 72 ineffective against *Botryosphaeria corticis* on *Vaccinium corymbosum*, 2129.

Byssochlamys fulva, electron microscopy, 1993.

— —, separating ascospores, 72.

*— *nivea* var. *lagunculariae* and **B. zollneriae* on timber, 1818.

C-6 (antibiotic) against *Pseudomonas solanacearum* on potato, 1465.

Cabbage (*Brassica oleracea*), *Alternaria* on, control, 885.

— black speck, non-parasitic, 1824.

—, *Erwinia aroideae* and *E. carotovora* on, nature of foci, 2802.

—, *Fusarium oxysporum* ff.sp. on, fusaric acid in selective pathogenicity, 940.

—, — f.sp. *conglutinans* on, factors affecting, 884; histology, 883; var. react., 324y, 883.

—, *Moniliopsis aderholdii* on, incidence not correlated with major nutrients, 884.

—, mycoflora on roots, Lebanon, 716.

—, nutritional disorders, 913.

—, *Peronospora parasitica* on, electron microscopy, 2216.

—, ?*Phytophthora* on, Norway, 591.

—, *Plasmopiphora brassicae* on, growth of callus, 287; systemic infection, 3501.

—, *Sclerotium cepivorum* on, 720.

—, turnip yellow mosaic virus on, effect of chemicals on multiplication, 3692; incorporation of radio-active uridine, 77; purification of replicate, 882.

—, *Xanthomonas campestris* on, Italy, 2219; extracellular polysaccharide, 3505; symptoms, 2219; var. react., 2219; xylem plugging, 3042.

—, Chinese (*Brassica pekinensis*), 'Kwuting' virus on, transmission by vectors, 1501.

—, —, *Peronospora parasitica* on, Fiji, 1877b; *Norway, 3502.

Cacao (*Theobroma cacao*), *Botryodiplodia* on, effect of imbalances of micro-elements, 1579.

—, *Calonectria rigidiuscula* on, Guyana, 3560a; Nigeria, 721b.

—, *Ceratocystis fimbriata* on, Dominican Republic, control, 1580; effect on, 2806; testing resistance, 2807.

— die-back in Papua and New Guinea, 1579, 1878; Sabah, factors affecting, 3562c; micro-elements in relation to, 1579.

— diseases, Ghana, 88.

[Cacao], fungi on stored, 3742.

—, *Marasmius equicrinis* and *M. scandens* on, Sabah, control, 3562a.

— mottle leaf virus on cacao, host range differentiation, 3751.

—, *Phytophthora heveae* on, Sabah, 1873b.

—, — *palmivora* on, Fiji, 1877a, 2403; Ghana, 96; Ivory Coast, 2404; Jamaica, 423; Nigeria, 721a, b; Papua and New Guinea, 1878; S.W. Pacific, 2403; W. Malaysia, 2389b; association of *Calonectria rigidiuscula* with, 1877a, 2403; causing dieback, 2389b; control, 721b; effect of insecticides, 721a; factors affecting, 2389b; motility and chemotaxis of zoospores, 3625; pathogenicity, 2403; screening fungicides against, 721a; survival, 721b; testing for resistance, 721a, 2404; var. react., 2403.

— root rot, Papua and New Guinea, 1878.

— swollen shoot virus CMI/AAB description, 3151.

— — —, electron microscopy, 3077j.

— — —, local lesion host, 95c.

— — — on cacao, Nigeria, 721a, b; availability to mealybugs, 95d; factors affecting, 95b; host range differentiation, 3751; mechanical inoculation, 95a, 721a; serology and tolerance, 721b; transmission, 721b, 1265.

— — — on cowpea, 721a.

—, *Trachysphaera fructigena* on, Congo, 89.

— veinbanding ?virus disease, Sabah, 3562b.

— ?virus disease, Ghana, symptoms, 95e.

— yellow mosaic virus, CMI/AAB description, 3151.

Cactus, ?*Fusarium oxysporum* on, Germany (S.), 1048.

—, *Leucocoprinus birnbaumii* in peat substrate wrongly identified as *Armillaria mellea*, 1048.

— virus X, serology, 977.

Calcium, effect on cork spot and mineral content of apple, 2539; manganese toxicity in *Medicago*, 3365; polygalacturonases in *Fusarium roseum*, 324c; resistance of tomato to *Verticillium albo-atrum*, 2727w; susceptibility of cotton to *Fusarium* and *Verticillium*, 3306.

— chloride against apple bitter pit, 1715; grapevine stem atrophy, 532; lettuce tipburn, 621.

— — injury to *Acer platanoides*, 1160.

— cyanamide, effect on *Corticium rolfsii*, 1553b; *Diplodia maydis*, 1553a; *Erysiphe graminis* on wheat, 3769; *Gibberella zaeae*, 1553a; *Sclerotinia*, 1553c.

— gluconate, produced by *Aspergillus niger* str. A-15, 1279.

— nitrate against apple bitter pit, 1715; lettuce tipburn, 621.

Callistephus chinensis, see Aster.

Calonectria nivalis on barley, 1340.

— — on cereals, 1870a.

— — on *Festuca*, 1690.

— — on grasses, 1691.

— — on *Poa pratensis*, 1690.

— — on rye, 1537k.

— — on wheat, 999, 3775.

— *rigidiuscula* on cacao, 721b, 3560a; associated with *Phytophthora palmivora*, 1877a, 2403.

GENERAL INDEX

Camarosporium punctiforme on *Kochia prostrata*, 496.
 — *strobilinum*, systematics, 1164.
Camellia, *Glomerella cingulata* on, factors affecting sporulation, 3324.
 — *sinensis*, see *Tea*.
Campanula bononiensis, effect of extracts on tobacco mosaic virus, 2986.
Canavalia ensiformis, *Desmodium paniculatum* virus can infect, 3084e.
Candida arborea, effect on potato virus X, 1453, 2173.
 — *krusei* on citrus and lemon, 3282.
 — *tropicalis*, effect on potato virus X, 1453, 2173.
Cannabis sativa, see *Hemp*.
Cantaloupe (*Cucumis melo* var. *cantaloupina*), *Alternaria* on, control, 3071.
 —, *Corticium solani* on, 623.
 —, cucumber mosaic virus on, effect on root decay, 623.
 —, *Fusarium* on, control, 3071.
 —, — *oxysporum*, *Macrophomina phaseoli* and *Pythium aphanidermatum* on, 623.
 —, *Rhizopus* on, control, 3071.
 —, *Sphaerotheca fuliginea* on, control, 626.
 —, watermelon mosaic virus on, effect on root decay, 623.
 **Capsella bursa-pastoris*, *Xanthomonas campestris* on, 886.
Capsicum, alfalfa mosaic virus on, appearance and distribution in infected cells, 2377; effect on pollen fertility, 3547.
 —, *Alternaria tenuissima* on, control, 631.
 — as indicator for tobacco etch virus, 2990.
 —, broad bean wilt virus on, effect on pollen fertility, 3547.
 —, *Cercospora capsici* on, Singapore, 714.
 —, *Colletotrichum capsici* on, India, 2276; Italy, 2277; breeding against and var. react., 2276.
 —, cucumber mosaic virus on, France, 1; control, 2274; effect of N-dimethylamino-succinamic acid and topping on, 630; effect on pollen fertility, 3547; losses, 2274; transmission by vectors, 2274; var. react., 1861.
 —, — necrotic spot virus, effect on pollen fertility, 3547.
 —, *Curvularia ovoidea* on, effect of P sources, 3638; effect on amino acid contents of leaves, 3549.
 —, *Fusarium oxysporum* on, Armenian SSR, 2032.
 —, *Glomerella piperata* on, Italy, 2277.
 *—, *Leveillula taurica* on, Fiji, 1877b.
 —, mycoflora in rhizosphere of healthy and virus infected plants, 3715.
 —, — on roots, Lebanon, 716.
 *—, *Pestalotiopsis palmarum* on, India, 2720.
 —, *Phytophthora capsici* on, France, 1.
 —, potato virus X on, antiviral principle induced by, 3712.
 —, —, — mottle str. on, effect on pollen fertility, 3547.
 —, —, — ringspot str. on, 3548.
 —, —, — Y on, transmission by vectors, 2274.
 —, —, — str. on, 906, 2796; Brazil, genetics of resistance, 2719.
 [—, *Capsicum*], *Pseudomonas solanacearum* on, 3579; *Kenya, 637a.
 —, *Pythium aphanidermatum* on, control, 1900.
 —, RNase activity in relation to virus inhibition, 401.
 —, rosette virus on *Capsicum*, breeding against, 3072.
 —, *Stemphylium solani* on, USA, 319.
 —, stolbur on, USSR, 3172; Yugoslavia, 910j, 2275; control, 712, 3172; *Convolvulus arvensis* source of infection, 2275; effect of antibiotics, 354; symptoms, 3172; transmission by vectors, 2275, 3172.
 —, tobacco etch virus on, Venezuela, transmission by vectors, 2990.
 —, — mosaic virus on, France, 1; control, 318; effect on pollen fertility, 3547; on respiration, 2023; var. react., 318.
 —, —, — P str. on, serology, 2637.
 —, *Verticillium albo-atrum* on, Armenian SSR, 2032.
 *—, — *dahliae* on, Turkey, 3182b.
 —, *Xanthomonas vesicatoria* on, 14; preservation and virulence, 1262.
Captafol against *Colletotrichum* on coffee, 1378b; *Didymella applanata* and *Elsinoe veneta* on raspberry, 2307x; *Glomerella cingulata* on coffee, 2863a, 3290; *Marsannina salicicola* on *Salix alba*, 3491.
 — deposits, factors affecting, 3079b.
 —, effect on *Glomerella cingulata* on coffee, 1027.
 — ineffective against *Hemileia vastatrix*, 3290.
Captan against *Acroconidiella tropaeoli* on *Tropaeolum majus*, 1685; *Alternaria brassicæ*, 17; *Aspergillus niger* on groundnut, 1227; banana diseases, 1100; *Botrytis cinerea* on raspberry, 1435; on strawberry, 2133; *Colletotrichum* on papaw, 1740a; *Corticium solani* on cotton, 160; *Cronartium ribicola* on currant and gooseberry, 213; *Erwinia atroseptica* on potato, 239; *Fusarium* on cucumber, 627; *F. and Gibberella fujikuroi* on *Sansevieria*, 3350; *Gerbera* diseases, 775; *Glomerella cingulata* on papaw, 1740a; *Leptosphaeria coniothyrium* on rose, 3349; moulds on cantaloupe, 3071; papaw rots, 1740a; pear diseases, 1719; *Pezicula malicorticis* on apple, 515; *Phytophthora cryptogea* on gloxinia, 330m; *P. infestans* on potato, 826, 1120; *Plasmopara viticola*, 530, 2567; *Plenodomus destruens* on sweet potato, 3551; *Pythium* on cucumber, 627; *Rhizopus* on groundnut, 1227; *Septoria lycopersici*, 2651; storage disorders of apple, 2536; of strawberry, 2935; *Trichoseptoria fructigena* on apple, 515; *Venturia inaequalis*, 1422, 1537j; *V. pirina*, 1422, 2915; as seed treatment for cotton, 3313; lentil, 3516; pea, 3516; rice, 1646; wheat, 3211; as soil treatment, 1678, 2413, 3543.
 —, effect on apple, 1072, 2535; on grapevine, 2946; on *Phytophthora*-infected tomato, 3483; on soil fungi, 3662; on strawberry, 1735, 2561.
 — persistence in soil, 352, 2313.
 — toxicity to *Euphorbia pulcherrima*, 1400; peach, 2123.

GENERAL INDEX

[Captan] 50 as soil treatment, 1784.
 — — toxicity to potato, 1458.
 — 50W against *Botrytis cinerea* on strawberry, 2285f.
 — 75 as seed treatment for tomato, 556, 1784.
Caragana arborescens, *Cucurbitaria caraganae* on, spore viability, 3627.
Caraway (*Carum carvi*), *Ramularia coriandri* can infect, 225.
Carbadin against *Polystigma rubrum* on plum, 517.
Carbamate against *Cercospora beticola*, 1828.
Carbamoyloxim, effect on *Aphanomyces* on beet, 1196.
Carbathion against *Fusarium oxysporum* f.sp. *vasinfectum* and *V. dahliae* on cotton, 155; as soil treatment, 1522, 1657.
 Carbon dioxide against post-harvest decay of strawberry, 2132.
 — —, effect on potato black spot, 2977; on soil fungi, 381.
 Carboxin as seed treatment for cereals, 2307k.
 — in soil, plants and animals, 2308c.
 —, popular review, 3596.
 — trials in UK, 2307l.
 Carboxine against *Fusicoccum amygdali* on peach, 2923; *Pezicula malicorticis* and *Trichoseptoria fructigena* on apple, 514.
 — as seed treatment for bean, *Phaseolus mungo* and radish, 3600; as soil treatment, 3600.
Carica papaya, see Papaw.
Carnation (*Dianthus caryophyllus*), *Alternaria alternata* on, Finland, 1673.
 —, bacteria on, identifying, and symptomless host, 3328.
 —, *Cladosporium* on, Finland, 1673.
 — diseases, Spain, 1047.
 —, effect of extracts on infectivity of tobacco mosaic virus, 2986.
 —, *Erwinia chrysanthemi* on, anatomical study, 1676.
 —, — *parthenii* var. *dianthicola* on, Netherlands, screening, 1538f.
 — etched ring virus on carnation, 909j; Netherlands, purification, 1538r; Sweden, diagnosis, 1395.
 — — — on *Silene armeria*, 1538r.
 —, *Fusarium arthrosporioides*, *F. avenaceum*, *F. culmorum* and *F. oxysporum* on, Finland, 1673.
 —, — *oxysporum* f.sp. *dianthi* on, Jersey, 321c; control by *Bacillus subtilis*, 3327.
 —, — *roseum* on, factors affecting, 1049; *Pratylenchus penetrans* in relation to, 1396.
 —, — ff.sp. on, fusaric acid in selective pathogenicity, 940.
 — Italian ringspot virus, UK, introduced from Italy and USA, study, 2881.
 — mottle virus, OMI/AAB description, 3151.
 — — —, estimating and purifying, 3325.
 — — — on carnation, Sweden, diagnosis, 1395; production of virus-free plants, 3326.
 —, *Pseudomonas caryophylli* on, detecting, 3328.
 — ringspot virus on carnation, Sweden, diagnosis, 1395.
 *[Carnation], *Sclerotinia minor* and *S. sclerotiorum* on, Italy, 170.
 — streak virus on carnation, Sweden, diagnosis, 1395; production of virus-free plants, 3326.
 —, *Uromyces dianthi* on, France, 1675; Jersey, 321c; control, 169, 1675.
 — vein mottle virus on carnation, Sweden, diagnosis, 1395.
 —, *Verticillium cinerescens* on, factors affecting symptom expression and inoculum potential, 1674; localization, 494.
 — virus diseases on carnation, Sweden, 1395; elimination by heat treatment and meristem-tip culture, 909s; simultaneous infection, 1394.
 Carpene against *Blumeriella jaapii* on cherry, 2127.
Carpodapsa pomonella, control by *Beauveria bassiana*, 2304.
Carpinus betulus, see Hornbeam.
Carrot (*Daucus carota*), *Alternaria dauci* on, Assam, control, 616; heterokaryosis in, 3539; var. react, 616.
 *—, celery mosaic virus on, Japan, 3065.
 —, *Centrospora acerina* on, pathogenicity, stream water as source of inoculum, 1526.
 —, *Ceratocystis fimbriata* on, ethylene production in relation to, 1528.
 —, *Chalaropsis thielavioides* on, Germany, damage, 1232.
 —, cucumber mosaic virus on, Japan, 3065.
 —, *Diplodia* can infect, 2121.
 — diseases, control, 1527.
 —, *Fusarium* on, USA, 3538.
 — motley dwarf disease, UK, carrot mottle + carrot red leaf viruses causing, 310; epidemiology, 3077k.
 — mottle + carrot red leaf viruses on carrot, 310.
 —, *Rhizoctonia* on, USA, causing cavity spot and crown rot, different from *R. carotae*, 3538.
 —, — *carotae* on stored, virulence, 615.
 —, *Stemphylium radicum* on, survival in soil, 3555d.
 — virus disease, effect on macronutrient contents, 2255.
Carthamus tinctorius, see Safflower.
Carum carvi, see Caraway.
Carya pallida mycorrhiza, types, 1556.
 — pecan, see Pecan.
Caryophyllaceae, *Verticillium cinerescens* on, susceptibility, 2500.
Cassava (*Manihot utilissima*), *Asterina manihotis* on, Sabah, 3562i.
 —, *Cercospora caribaea* on, 907.
 —, *Glomerella cingulata* on, antimicrobial activity, 658.
 — mosaic virus on cucumber, 2262.
 —, *Xanthomonas manihotis* on, Brazil, 2724.
Cassia bicapsularis virus, properties, 2286e.
 *— *occidentalis*, tobacco streak virus on, 3530.
 — *tora*, *Fusarium oxysporum* f.sp. *cassiae* on, 422.
Castanea, see Chestnut.
Castor, see *Ricinus communis*.
Cattleya, *Cymbidium* mosaic virus on, in relation to flower necrosis, 1247c, 2092.

GENERAL INDEX

Cauliflower (*Brassica oleracea*), *Alternaria brassicae* on, factors affecting growth and sporulation, 2217.

—, *Choanephora cucurbitarum* and *Corticium rolfsii* on, India, causing leaf rot, 3731a.

— damping-off, control, 1317.

—, fungi on leaf fibrous residue, 3620.

—, molybdenum deficiency in, var. react., 3043.

— mosaic virus, conversion of particles, 2379.

— — —, inclusions of *Dahlia* mosaic virus on *Verbesina encelioides* indistinguishable from, 909m.

— — — on *Brassica perviridis*, 1820.

—, *Phytophthora megasperma* var. *sojae* on, susceptibility, 1849.

—, *Plasmodiophora brassicae* on, Jersey, 321b.

—, *Pythium oedochilum* on, India, 86.

—, *Xanthomonas campestris* on, Italy, 2219.

Cavariella aegopodii transmitting carrot mottle+red leaf viruses, 310; parsnip mosaic virus, 1857.

— *pastinaceae* transmitting *Heracleum sphondylium* virus, 3555n.

— *theobaldi* transmitting parsnip mosaic virus, 1857.

COC, effect on *Cercosporalla herpotrichoides* on cereals, 426; wheat, 1612; on cereal diseases, 2411; on *Fusarium culmorum* and *Leptosphaeria nodorum* on cereals, 426; on *L. nodorum* on wheat, 3209.

Ceanothus velutinus, *Armillaria mellea* on, factors affecting rhizomorph development, 1677.

— — —, fungi and *Nectria coccinea* on, 1677.

Cedar (*Cedrus*), *Diplodia pinea* can infect, 278.

— posts, effect on tobacco, 3477.

**Cedrela odorata*, *Pleurotus ostreatus* on, Egypt, 1791.

Cedrus, see Cedar.

— *deodara*, see Deodar.

Cela W 524 against *Erysiphales*, Uredinales and *Venturia inaequalis*, 2308q.

Celeriac, see Celery.

Celery (*Apium graveolens*), aster yellows on, effect of achromycin and aureomycin on, and transmission by vectors, 2024.

*— black heart, Italy, 1569a.

—, *Fusarium oxysporum* f.sp. *apii* and *F. o. f.sp. cassiae* on, 422.

— leaf spot, factors, affecting, 2282c.

*— mosaic virus on carrot, 3065.

— — — on celery, France, electron microscopy, inactivation and transmission by vectors, 617.

— nutritional disorders, 913.

—, peach western X disease virus can infect, 2797.

—, *Septoria* on seed, UK, 2713.

—, — *apiicola* on, Guyana, 3560c; Advis. Leafl., 618; build-up and spread, 3555e; control, 2282k, 3540, 3555e.

*—, *Stemphylium radicum* on, Italy, 1569a.

—, strawberry latent ringspot virus on, *Arabis* mosaic and cucumber mosaic viruses associated with, causing strap-leaf disease, 1858.

[Celery] virus associated with tomato black ring virus celery yellow vein str., serological relationship to Hungarian grapevine chrome mosaic virus, 909k.

—, filamentous, 1858; hosts of and related to western celery mosaic virus, 3555m.

— western celery mosaic virus on, UK, *Conium maculatum* as source of infection, 3066.

*— — — — on coriander, 3555k.

Cell wall biochemistry in relation to infection process, 1260g.

Cellocidin, effect on *Xanthomonas oryzicola* on rice, 2854.

Cellulose decomposition by fungi, effect of trace elements, 366.

**Celosia cristata*, *Corticium solani* on, 85a.

Celtis laevigata, *Polyporus zonalis* on, USA, butt rot in relation to, 3011.

Cenchrus ciliaris, *Sorosporium penniseti* on, Kenya, 637b.

Cenococcum graniforme, isolating from sclerotia, 358.

— — — on pine forming mycorrhiza, 1911.

— — — on *Pseudotsuga menziesii*, forming mycorrhiza, 3611.

Centaurea imperialis virus diseases, 2008f.

*— *moschata*, *Erysiphe cichoracearum* on, India, 1671.

Centrospora acerina on carrot and parsnip, 1526.

Cephaeluros mycoidea on *Paullina cupana* var. *sorobilis*, 228.

— *parasiticus* on tea, 2628.

?*Cephalosporin C* produced by *Cephalosporium gramineum* on wheat straw, 1335.

?*Cephalosporiopsis* on *Ranunculus asiaticus*, 910c.

Cephalosporium acremonium on maize, 3243.

— *gramineum* in soil, 1611.

— — — on cereals and weeds, 2307h.

— — — on wheat, 1335, 1610, 1611.

— *gregatum* on soybean, 1222, 1850.

— *maydis* on maize, 3243.

*— *zonatum* on *Boehmeria nivea* and *Luffa*, 327e.

Ceratobasidium ramicola perfect state of *Rhizoctonia ramicola* on *Pittosporum tobira*, 963.

Ceratocystis adiposum on sugarcane, 550.

— *caeruleascens* on pine, 3497.

— *fagacearum* on oak, see Oak.

— — —, ergosterol in, 372.

— — —, lysosome contents, 2291.

— *fimbriata*, lysosome contents, 2291.

— — — on cacao, 1580, 2806, 2807.

— — — on carrot, 1528.

— — — on *Hevea* rubber, 831.

— — — on stone fruit, 211.

— — — on sweet potato, 1246, 1528, 1866, 2281.

— — —, perithecial formation, 2757.

— *ips* and *C. minor* on pine, 3497.

— *minor*, producing enzymes, 953.

— *montia* in mycangium of *Dendroctonus ponderosae*, 3038.

— — —, *C. multiannulata* and *C. olivacea* on pine, 3497.

— *paradoxa* on banana, 1100, 3403.

— — — on oil palm, 1873a.

— — — on sugarcane, 242, 550, 833.

GENERAL INDEX

[*Ceratocystis*] *picaceae* on timber, 586.
 — *piliifera* on pine, 3497.
 — *pini* on timber, 586.
 — *ulmi* on elm, see Elm.
 — —, perithecial formation, 3012.
Ceratoma trifurcata, transmitting bean pod mottle virus, 3084h; bean southern mosaic virus, cowpea str., 2243.
**Cercospora bauhiniae* on *Bauhinia purpurea*, 715.
 — *beticola* on beet, see Beet.
*— *canescens* on *Stizolobium deerlingianum*, 3738.
 — *capsici* on *Capsicum*, 714.
 — *caribaea* on cassava, 907.
 — *citrullina* on Cucurbitaceae, 2805.
*— — on *Sechium edule*, 715.
 — *coffeicola* on coffee, 151, *1026.
*— *coriandri* on coriander, 815.
 — *cruenta* on cowpea, 2245.
 — *elaeidis* on oil palm, 2154a, *2581, 3433.
 — *gossypina* on cotton, 1029.
*— *handelii* on rhododendron, 3736.
 — *henningsii* and *C. hibisci*, growth and sporulation, 38.
 — *jasminicola*, N requirements, 1944.
 — — on jasmine, 2090.
 — *koepkei* on sugarcane, 714, *917a.
*— *lathyrina* on *Lathyrus sativus*, 717.
 — *nasturtii* on watercress, 330h.
 — *nicotianae* on tobacco, see Tobacco.
*— *oryzae* on *Panicum repens*, 2477.
*— — on rice, 90.
*— *penniseti* on *Pennisetum typhoides*, 3256.
 — *piricola* on pear, 1083.
 — *psidii* on guava, 1742.
*— *rubi* on raspberry, 717.
 — *sawadae* on guava, 1742.
*— *stizolobii* on *Stizolobium deerlingianum*, 3738.
 — *viticola* on grapevine, 2948.
 — *zebrina* on clover, 1059.
Cercospora herpotrichoides on barley, 2425, 2441, 3078a.
 — — on cereals, 426, 2307b, j, 3773.
 — — on Gramineae, 2282j, 2426.
 — — on oats, 2282j.
 — — on wheat, see Wheat.
 — —, str. specificity, 635f.
Cercosporidium bougainvilleae on *Bougainvillea*, 330p.
Cereals, barley yellow dwarf virus on, Colombia, 2809; effect of systemic chemicals, 2307b; effect on yield, transmission by vectors and var. react., 2808.
—, *Calonectria nivalis* on, Scotland, 1870a.
—, *Cephalosporium gramineum* on, effect of crop conditions on, hosts, and survival, 2307h.
—, *Cercospora herpotrichoides* on, effect of CCC, 426; of soil treatment, 2307j; of crop rotation, 3773; of systemic chemicals, 2307b.
— diseases, Argentina, 2803; NSW, 986; USSR, 92; assessment, 2803; breeding against, 3556a; control, 92, 1547; effect on, 2307a; var. react., 2803.
—, *Erysiphe graminis* on, biology, 425; control, 425, 1584, 2307c, 2308e, 2727c, 3077l; effect of systemic chemicals, 2307b; epidemiology, 3077l; symptoms, 425.
—, fungi on seed, factors affecting, 427.
[Cereals], *Fusarium* on, effect of soil treatment, 2307j.
—, — *culmorum* and *Leptosphaeria nodorum* on, effect of CCC, 426.
—, *Ophiobolus graminis* on, effect of soil treatment, 2307j; factors affecting, 3191; resistance, 1585.
—, *Puccinia graminis* on, USSR, 2811; nature of foci, 2802; physiologic races, 2811.
—, *Pyrenophora graminea* on, Finland, 2031, 3753; effect of seed treatment, 3753.
—, *Pythium* on, effect of soil treatment, 2307j.
—, seed and soil-borne pathogens of, 2307i.
—, — treatment, 635, 2307k; Finland, 3753.
—, *Septoria* on, USSR, 2100.
—, storage disorders, Ethiopia, problems, 1586.
—, *Tilletia* on, Finland, 2031; electron microscopy, 968.
—, — *caries* on, Finland, seed treatment, 3753.
—, Uredinales on, 635c.
—, Ustilaginales on, Italy, 2407.
—, virus diseases, India, 326; Scandinavia, 424; classification and identification, 1587.
Ceresan against *Corticium solani* on tomato, 566; *Diplodia natalensis* on mango, 2941; *Fusarium oxysporum* f.sp. *lycopersici* on tomato, 566; as seed treatment for maize, 3249; potato, 2610; sesame, 2961; sorghum, 468; soybean, 2708; wheat, 2429, 3211.
— L against *Fusarium oxysporum* f.sp. *gladioli*, 330s.
— M against rice microflora, 754; as seed treatment for barley, 452.
— wet against *Corynespora cassiicola* on sesame, 2960; *Pyricularia oryzae* on rice, 1645; *Trichocomis padwickii* on rice, 1022; as seed treatment for cotton, 3313.
Ceriporiopsis placenta, taxonomy, 2687.
Cerotelium fici on mulberry, 3134.
Cestrum parqui, tobacco mosaic virus on, Argentina, 844.
CFA salt as timber preservative, 590.
Chaetomium globosum, cell wall proteins, 1956.
— —, effect of temp. gradients on, 71.
— — on *Pennisetum typhoides*, 136.
— — on timber, 1183.
**Chalara quercina* on oak, 1795.
Chalaropsis thieliaviooides on carrot, 1232.
— — on *Euphorbia pulcherrima*, 3337.
Chamaecyparis, *Phomopsis juniperovora* on, USA, resistance in epidemics, 2673.
— *lawsoniana*, *Phytophthora cinnamomi* on, Netherlands, 1538g; popular account, 2093.
Chamaedaphne calyculata, *Pseudophacidium ledii* on, Canada, 1497.
Chamaerops, see Palm.
Charcoal rot complex, 331p.
Cheiranthus cheiri, see Wallflower.
Chemical control of postharvest diseases, 3098.
Chenopodiaceae as indicator for potato virus S, 2593.
Chenopodium as host for apple chlorotic leaf spot virus, 1698.
—, *Colletotrichum spinaceae* can infect, 3555g.

GENERAL INDEX

[*Chenopodium*], parsnip mosaic virus on, 1857.
 *—, potato virus S on, 2593.
 —, *Setaria* mosaic virus on, 5i.
 —, *album*, *Colletotrichum spinaceae* can infect, 3555g.
 —, cucumber mosaic virus can infect, 1478.
 —, inhibiting watermelon mosaic virus, 311.
 —, *Mycosphaerella cruenta* on, India, 606.
 —, pea virus disease on, 5n.
 —, tobacco mosaic virus and turnip mosaic virus Japanese str. on, translocated necrotic lesions, 402.
 —, *amaranticolor*, apple chlorotic leafspot+ strawberry latent ringspot viruses on, interaction, 3384.
 —, as host for apple chlorotic leaf spot virus, 1698.
 —, as indicator for carnation Italian ringspot virus, 2881; cherry rasp leaf virus, 208; potato viruses, 2586.
 —, barley stripe mosaic virus can infect, 2434.
 —, — virus A can infect, 3776.
 —, *Crotalaria* mosaic virus ?can infect, 417.
 —, grapevine fanleaf virus on, electron microscopy, 808.
 —, groundnut mottle virus can infect, 2286b.
 —, inhibiting watermelon mosaic virus, 311.
 —, melon vein necrosis virus can infect, 2268.
 —, pea enation mosaic virus can infect, 292.
 —, — virus on, 5n.
 —, strawberry latent ringspot virus on, inclusion bodies, 3154.
 —, tobacco mosaic virus on, effect of water supply on susceptibility, 403; factors affecting RNA infectivity, 3706; inhibition of, 2020; translocated necrotic lesions, 402.
 —, necrosis virus on, inhibition, 2020.
 —, turnip mosaic virus on, inhibition by pine juice, 1186.
 —, —, — Japanese str. on, translocated necrotic lesions, 402.
 —, *ambrosioides*, plum pox virus can infect, 2547.
 —, *foetidum*, plum virus can infect, 2545, 2920.
 —, *foliosum*, beet yellows virus on, transmission mechanically, 594.
 —, plum pox virus can infect, 2547.
 —, *giganteum*, *Narcissus* mosaic virus can infect, 2889.
 —, *murale*, *Mycosphaerella cruenta* on, India, 606.
 —, potato viruses X+Y on, interference between, 2589.
 —, *quinoa*, apple stem grooving virus can infect, 1075.
 —, — viruses on, 5k.
 —, as indicator for apple chlorotic leaf spot virus, 189, 1698; apple viruses, 195; cherry rasp leaf virus, 208; grapevine fanleaf virus, 1443; plum pox virus, 2920; strawberry latent ringspot virus, 1158; tobacco mosaic virus, 2998; tomato bushy stunt virus on apple, 1076.
 [*Chenopodium quinoa*], beet mosaic virus on, purification, 593.
 —, — yellows virus on, transmission mechanically, 594.
 —, grapevine viruses can infect, 3415.
 —, groundnut mottle virus can infect, 2286b.
 —, pea virus on, 5n.
 —, raspberry ringspot virus on, transmission by vectors, 414.
 —, *Sambucus canadensis* virus can infect, 3557i.
 —, tobacco streak virus on, 909m; factors affecting component ratios, 3166.
 —, tomato black ring virus on, transmission by vectors, 414.
Cherry (*Prunus avium* and *P. cerasus*), apple chlorotic leaf spot virus on, 189, 1698.
 —, *Blumeriella jaapii* on, Poland, 2105; USSR, 2127; control, 190c, 2105, 2127; factors affecting, 2127; resistance, 519.
 —, detrimental canker, study on, 2522o.
 —, *Dibotryon morbosum* on, organisms associated with, 324l.
 —, diseases, control, 650.
 —, *Gnomonia erythrostoma* on, USSR, 3392.
 —, *Lambertella corni-maris* can infect, 202.
 —, leaf roll virus, hosts, 2725h.
 —, — on cherry, 2725h; detecting, 2523f.
 —, — on fruit, 785.
 —, — on *Nicotiana rustica*, 76, 3153, 3555o, p.
 —, — tubular inclusion bodies in hosts, 3153.
 —, line pattern virus on cherry, not identical with plum line pattern virus, 2522p.
 *—, little cherry virus, NZ, symptomless host, 2919.
 —, necrotic ringspot virus on rose, 1538r.
 —, *Podosphaera oxyacanthae* on, control, 199.
 —, prune dwarf virus on, 3383; inactivation in seed, 1087; serology, 209.
 —, *Prunus* necrotic ringspot virus on, inactivation in seed, 1087; serology, 209.
 *—, *Pseudomonas* on, Canada, similarity of symptoms to those in England and USA, 1434.
 —, *mors-prunorum* on, Germany (W.), 2554; epiphytic survival, 1723; eradicating, 2725a; host specificity, 2725a; var. react, 2554.
 —, rasp leaf virus, transmission by vectors, 208.
 —, ringspot virus on cherry, Czechoslovakia, 1428.
 —, viruses on *Prunus*, 2522x.
 —, *Sclerotinia* on, Germany (E.), 2284.
 —, spur virus on cherry, hosts, 1431.
 *—, *Taphrina flectens* on, Canada (BC), 257f.
 —, virus diseases, Denmark, 1416; serology, 2523e.
Cherry-plum, see *Prunus cerasifera*.
 **Chestnut* (*Castanea*), *Cylindrosporium castaneae* on, Greece, 3736.
 —, *Endothia parasitica* on, hypovirulence, 861, 862.

[Chestnut], zinc toxicity in, 913.
 Chevron PP675 as soil treatment, 626.
 Chick pea, see *Cicer arietinum*.
 **Chicory* (*Cichorium intybus*), *Corticium solani* and *Pseudomonas cichorii* on, Italy, 1569a.
 Chilli, see *Capsicum*.
 China aster, see *Aster*.
 **Chives* (*Allium schoenoprasum*), *Puccinia mixta* on, Canada, 1525.
 Chloramphenicol, effect on tobacco mosaic virus on cucumber and *Nicotiana glutinosa*, 3158; on tobacco, 843.
 Chlorine injury to plants, 1578.
 Chlormequat as seed treatment for oats, 2307o.
 p-chloroformanilide, effect on *Verticillium* on cotton, 1036.
 Chloroneb against *Corticium solani* on cotton, 159; *Pythium aphanidermatum* on crop plants, 1900.
 — ineffective against *Ustilago striiformis* on *Poa pratensis*, 2098.
 — translocation in cotton, 1039.
 Chloropicrin against *Verticillium dahliae* on *Euphorbia pulcherrima*, 3335; as soil treatment, 895, 1178, 1538h, 1611, 2727l, 2828.
 —, fungitoxicity in soil, 3660.
 Chlortetracycline hydrochloride against eggplant little leaf and *Vinca rosea* little leaf, 317.
Choanephora cucurbitarum on cauliflower, 3731a.
 — on *Hibiscus esculentus* and *Luffa cylindrica*, 1863.
 — on watercress, 330h.
 ?*Chrysanthemum* aspermy virus on *Chrysanthemum*, Italy, description, 495.
 — diseases, Spain, 1047; control, 2499, 3329.
 —, *Erwinia chrysanthemi* on, legislation against, Sweden, 1909.
 —, *Fusarium oxysporum* f.sp. *chrysanthemi* on, description and relationships with other f.sp., 2885.
 — mild mottle virus on *Chrysanthemum*, Japan, hosts, properties, transmission, 3331.
 — mosaic virus on *Chrysanthemum*, transmission, 3330.
 *—, *Mycosphaerella ligulicola* on, Irish Republic, 3558a.
 — new disease, symptoms, transmission by grafting, viruses not associated, 5f.
 —, *Oidium chrysanthemi* on, control, 2310.
 —, *Phoma* and *P. chrysanthemicola* on, Germany, causing root and stem rot, 2282d.
 —, *Pythium aphanidermatum* on, USA, 1678.
 —, *Sclerotinia sclerotiorum* on, USA, 2087.
 — stunt virus on *Chrysanthemum*, 909l; control by meristem culture, 2884.
 —, tomato aspermy virus on, UK, producing virus free stock, 2883; transmission, 3330.
 —, *Verticillium albo-atrum* on, USA, 2087.
 — virus B on *Chrysanthemum*, control, 1538r.
 — — — on *Chrysanthemum indicum*, 2882.

[*Chrysanthemum* virus B] on *Petunia*, 774.
 — — diseases, elimination by heat treatment and meristem-tip culture, 909s.
 — *indicum*, *Chrysanthemum* virus B on, Germany (E.), economic importance, 2882.
 — —, *Phoma chrysanthemicola* on, Germany, 2501.
 — —, tomato aspermy virus on, Germany (E.), economic importance, 2882.
 — —, *Verticillium albo-atrum* on, Czechoslovakia, 3332.
 — — virus diseases, Germany (E.), economic importance, 2882.
Chrysomyxa ledi ff.sp. *glandulosi* and *rhododendri*, germination, 1282.
 — var. *glandulosi* on *Ledum glandulosum*, 1179.
 — *ledicola*, *C. piperiana* and *C. roanensis*, germination, 1282.
 — *weiri*, CMI description, 2338.
Cicadulina bipunctella and *C. coinai* transmitting *Eleusine coracana* virus, 2470.
Cicer arietinum, *Ascochyta rabiei* on, Israel, infection of seed, 3059; variability in, 1854.
 — —, *Aspergillus niger* in rhizosphere, effect of maleic hydrazide, 365.
 *— —, *Botrytis cinerea* on, India, connexion with *Sclerotinia*, 610.
 — —, fungi in rhizosphere, India, 2247.
 — —, *Fusarium lateritium* f.sp. *ciceri* on, Iran, 1520.
 — — virus diseases, Iran, hosts, transmission, 1519.
Cichorium endivia, see Endive, Escarole.
 — *intybus*, see Chicory.
Cicinnobella aequatorialis on *Piper betle*, 1109.
Cicinnobolus compositarum on *Oidium abelmoschi*, 3572.
Cinchona officinalis and *C. succirubra*, effect of extracts on potato virus X, 2156.
Cineraria (*Senecio cruentus*), *Alternaria senecionis* on, Italy, cultural characters, 2502.
 — phyllody virus, resembling clover dwarf virus, 2496.
 *—, *Sphaerotheca fusca* on, Denmark, 3081.
Citrange (*Citrus* hybrid), citrus psoriasis virus on, transmission by seed, 3274.
 — stunt virus on citrange, transmission mechanically, 3275.
 — — — on lemon, 2480.
Citrinin, inhibiting tobacco mosaic virus infection and oxidase activities, 556, 2987.
 — produced by *Penicillium*, 556.
Citrullus vulgaris, see Watermelon.
Citron (*Citrus medica*), citrus exocortis virus on, study, 475.
Citrus (including all *Citrus* hosts), air pollution, effect of, 2484.
 —, *Alternaria alternata* on, effect of inorganic chemicals, 481.
 *—, *Aspergillus niger* and *Botryodiplodia theobromae* on, India, 1650.
 — cachexia virus on orange, 2480.
 —, *Candida krusei* on stored, biphenyl ineffective against, 3282.
 *— crinkly leaf virus on citrus, USA (Fla.), 330c.
 — decay, 2-aminobutane residues, 3284.

GENERAL INDEX

[Citrus] decline, Brazil, cause unknown, 2071.

—, *Deuterophoma tracheiphila* on, legislation against, Lebanon, 1555.

—, *Diplodia* can infect, 2121.

—, *natalensis* on, Colombia, 3281; Iran, causing gummosis, 2862; control, 1025; var. react., 3281.

— diseases, Ghana, 88; air blast spraying, 330a; general review, 148.

—, *Elsinoe fawcettii* on, non-occurrence in USA (Calif.), 2804.

— exocortis virus on citron, 475.

— — — on citrus, 330e; Brazil, 756; Chile, 2480; non transmission by vectors, 1374; properties, 3278; study, 475; synergism with citrus psorosis virus, 2480.

— — — on lemon and lime, 475.

— — —, survival on implements, 2068.

— 'finger marks', Italy, 147; Turkey, 2389c.

—, *Fusarium* on, control, 479.

—, *Gloeosporium folicola* on, USA, 2073.

—, *limetticola* on, Fiji, 2392.

—, *Glomerella cingulata* on, India, 758; control, 1025; toxic metabolite production, 758.

— greening virus on citrus, India, 3272; Malawi, 1874e; S. Africa, 2857; effect on macroelement content of leaves, 2857; indexing, 3272; transmission by vectors, 3277.

— — — on orange, 2858.

—, *Guignardia citricarpa* on, 1025; NSW, 2074; control, 2074, 2075; factors affecting, 2074.

— gummosis in Iran, 2862; USA, 1649; *Diplodia natalensis* causing, 2862.

— hard pit virus, Lebanon, 755.

— impietratura virus, anatomical changes induced by, 477.

— — — on citrus, Israel, ?citrus psorosis virus associated with, indexing, 3799.

— — — on grapefruit, 1876a.

—, Indexing procedures for 15 virus diseases, manual, 2067.

— infectious variegation virus on bean, 3724.

— — — — on citrus, Australia, legislation against, 3273.

— micro-organisms, classification and identification, 482.

—, *Penicillium* on, causing post harvest decay, 3282; control, 759, 3282.

—, *digitatum* on, 760; control, 1025; pectic enzymes associated with, 2072; synergistic effect of gamma radiation and heat, 149.

—, *Phytophthora* on, causing post harvest decay, 3282.

—, *citrophthora* on, Qd, 480; USA, 1649, 3800; control, damage and symptoms, 3800.

—, *nicotianae* var. *parasitica* on, Colombia, 3281; Fiji, 1877b; Qd, 480; USA, 1649, 3800; control, 1376, 3800; factors affecting, 1376; var. react., 3281.

— 'pop corn', Italy, 147.

— psorosis virus complex, study on, 755, 2728i

[Citrus psorosis virus] on citrange, 3274. — — — on citrus, Australia, 3273; Brazil, 756; Chile, 2480; Lebanon, 755; W. Malaysia, 3279; legislation against and symptoms, 3273; synergism with citrus exocortis virus, 2480.

— — — on orange, 2859.

—, *Pythium* and *Rhizoctonia* on, control, 479.

— 'ring pattern', ?citrus psorosis virus causing, 476.

— ringspot virus on citrus, 1373; *Iran, 2860; Italy, 146.

— — — on grapefruit and lemon, 146.

— — — on lime, 1373.

— — — on orange, 146, *2860.

— (Satsuma) dwarf virus on citrus, susceptibility, 478.

— seed treatment, effect on viability, 3285.

—, *Septoria citri* and *S. limonum* on, control, 1024.

— storage disorders, Australia, 3404; advisory booklet, French, 220; control, 330k, l, 3282, 3404.

— stubborn disease virus on citrus, Cyprus, 1876b; Italy, 145; Lebanon, 755.

— — — on grapefruit and orange, 145, 2070.

— tatter leaf virus on lemon, 2480, *3738.

— — — +citrange stunt viruses on lemon, 3275.

—, tobacco necrosis virus on, susceptibility, 3280.

— tristeza virus causing Hassaku dwarf, 757.

— — — on citrus, 1375; Brazil, 756; Guyana, 3560b; India, 3272; W. Malaysia, 3279; indexing, 3272; legislation against, in Lebanon, 1555; transmission by vectors, 756.

— — — on lemon, 1375, 2480.

— — — on orange, 330d, 1375, 2481, 2856.

— — —, partial purification, 2069.

— variegation virus on *Antirrhinum* and *Petunia*, 3175.

—, *Xanthomonas citri* on, non-occurrence in USA (Calif.), 2804; str. studies, 1651.

— xyloporosis virus, Brazil, 756.

— — — cachexia virus, Lebanon, 755.

— *aurantifolia*, see Lime.

— *aurantium*, see Orange.

— *limonia*, see Lemon.

— *maxima*, see Shaddock.

— *paradisi*, see Grapefruit.

— *poonensis*, see Orange.

— *sinensis*, see Orange.

— *tankan*, see Orange.

— *trifoliata*, see *Poncirus trifoliata*.

Cladophora, *Labyrinthula* on, Cuba, antagonism to fungi, 1251.

Cladosporium cladosporioides, effect on *Cochliobolus sativus*, 3222.

— — — on grain, 97.

*— *cucumerinum* on cucumber, 1320.

— *herbarum*, effect of CO_2 and O_2 , 1948.

— — — effect on *Cochliobolus sativus*, 3222a.

— *hordei* and *C. linicola* in rhizosphere of tomato, 3009.

*— *oxysporum* on grapevine, 2950.

*— — — on *Hevea* rubber, 329c.

— *phlei* on *Phleum pratense*, 1406, 1407.

GENERAL INDEX

[*Cladosporium*] *resinae* in soil, 50.
 — — on birds, 3571.
 — *scillae* on *Scilla peruviana*, 3183.
 — *transchelii* in rhizosphere of tomato, 3009.
Clasterosporium carpophilum, see *Stigmina carpophila*.
Clavices microcephala on *Pennisetum typhoides*, 3791.
 — *purpurea*, alkaloid fermentations, 3104d.
 — — effect of CO_2 and O_2 on growth, 1943.
 — — on barley, 123.
 — — on *Poa pratensis*, 3358.
 — — on rye, see Rye.
 — — on wheat, 3212.
 — — on *Zizania*, 2066.
 — —, physiology of sclerotia, 2329.
 — —, ricinoleic acid in, as indication of sclerotial-like tissue, 1276.
 — *zizaniae* on *Zizania*, 2066.
Clematis, *Ascochyta clematidis* and *Coniothyrium clematidis-rectae* on, Netherlands, 1538g.
 **Clitocybe tabescens* on *elm and oak, 864.
Clonostachys araucaria var. *rosea* in soil, 3663.
 Clove (*Eugenia aromatica*), *Cryptosporrella eugeniae* on, causing dieback, *Endothia eugeniae* proposed for, 64.
 Clover (*Trifolium*), alfalfa mosaic virus on, 179c; Czechoslovakia, 2897.
 —, *Alternaria alternata* and *Ascochyta trifolii* on, 1059.
 —, bean yellow mosaic virus on, hosts, 179c.
 —, *Cercospora zebra* on, 1059.
 —, *Corticium rolfsii* on, Japan, antagonism of *Trichoderma viride*, dissemination and survival in soil, 782.
 —, *Curvularia trifolii* on, review, 179b.
 —, *Cymadothea trifolii* on, 1059.
 —, damping-off, 504.
 —, disease, Canada, transmission by vectors, 1408.
 —, diseases, 783; Japan, 179a.
 ?— dwarf virus on rape, 2215, 3041.
 —, effect of ozone, 1061.
 —, *Erysiphe communis* f.sp. *trifolii* on, conidial germination and overwintering, 3359.
 —, — *polygoni* on, effect on epidermal cells of resistant and susceptible vars., 3360; electron microscopy, 1060.
 —, *Fusarium* on, control, 783.
 —, *Kabatiella caulincola* on, 1059.
 —, *Leptosphaerulina trifolii* on, 635e.
 —, moulds on, NZ, 2517.
 —, *Mycosphaerella cruenta* on, India, 606.
 —, *Myrothecium roridum* on, biology, 503; toxin produced by, 2519.
 —, — *verrucaria* on, biology, 503.
 —, pea enation mosaic virus can infect, 292.
 —, — mosaic virus on, USSR, reservoirs of infection, 1837.
 —, *Phoma herbarum* var. *medicaginis* on, Poland, 184.
 —, phyllody, hosts, 1315.
 —, — mycoplasma-like organisms in, 1315, 3178, 3728.
 — — on Leguminosae, 3691.
 [Clover], *Phyllosticta trifolii* and *P. trifoliiseda* on, 1059.
 —, *Phytophthora megasperma* on, pathogenicity, 504.
 —, *Pleospora herbarum* on, 1059; description, 505.
 —, *Pseudopeziza trifolii* on, 1059.
 —, *Pythium* on, NSW, 2728c.
 —, red, enation mosaic virus on clover, Czechoslovakia, 2897.
 —, —, mottle virus on bean and broad bean, 416.
 —, — — on clover, Czechoslovakia, 2897; *Germany (E.), 2518; hosts, properties, and symptoms, 2518.
 —, — — on pea, 416.
 —, —, necrotic mosaic virus on clover, Czechoslovakia, 2897.
 —, —, vein mosaic virus on clover, Czechoslovakia, 2897.
 —, — — — on Leguminosae, 3691.
 —, — — — on pea, 1836.
 —, — — — +*Fusarium* on red clover, synergism, 1692.
 —, *Sclerotinia trifoliorum* on, Finland, 1693; effect of fungicides, 1694; overwintering, 1693; var. react., 3078a.
 —, *Sclerotium cepivorum* on, 720.
 —, soybean dwarf virus on, symptomless carrier, 1220.
 —, *Stagonospora meliloti* on, 1059.
 —, *Stemphylium sarciniforme* on, 635e.
 —, stolbur C & SM on, mycoplasma-like organisms in, 1315.
 —, subterranean, stunt virus, control, 1575d.
 —, — — —, pea top yellows virus similar to, 2728h.
 —, tobacco necrosis virus on, Spain, distribution, 1836.
 —, virus diseases, Czechoslovakia, 2897.
 —, white, enation virus on clover, morphology and localization, 781.
 —, —, mosaic virus on clover, 179c; Czechoslovakia, 2897.
 —, — — — on Leguminosae, 3691.
 ?—, — — —, preservation of infectivity, 409.
 —, — — —, serology, 977.
 —, wound tumour virus, cytopathology, 980.
 — — — —, fine structure, 1567.
 — — — —, hosts, 980.
 — — — —, multiplication, 412, 980.
 — — — — on clover, tumours in, 980.
 —, yellow mosaic virus, serology, 977.
 **Clypeolella ricini* on *Ricinus communis*, 327e.
 CMI descriptions of pathogenic fungi and bacteria set 22, 1975; set 23, 2338; set 24, 3090; set 25, 3131.
 — distribution maps of plant diseases, 84.
 —/AAB descriptions of plant viruses, set 1, 3151.
 Cobalt, effect on *Fusarium oxysporum* f.sp. *vasinfectum*, 1033; on resistance of potato to diseases, 2967; on virus diseases of potato and tomato, 1305.
 COBH as soil treatment, 1167.
 Cobre sandox against *Xanthomonas malvacearum*, 1043.
 **Coccoloba diversifolia*, *Phyllachora simplex* on, USA, 773.

GENERAL INDEX

Cochliobolus carbonum, auxotrophic mutants, 965.
 — —, mating of isolates, 2347.
 — — on bean, 1212.
 — — on grasses, 182.
 — — on maize, see *Maize*.
 — — producing amines similar to victoxine, 2762.
 — *heterostrophus* on Gramineae, 65.
 — — on maize, 463, 2845, 3786.
 — *lunatus* on sugarcane, 2169.
 — *miyabeanus*, electron microscopy, 1931.
 — —, growth and pigmentation in relation to nutrition, 1020.
 — —, host selectivity, 141.
 — —, utilization of hormones and vitamins, 2763.
 — *nodulosus*, CMI map, 84.
 — *sativus* cell wall, 945.
 — —, effect of ozone, 360; of plant excretions, 1964; of UV light on sporulation, 2282j.
 — —, factors affecting toxin production, 1935.
 — — in soil, 49, 382a, b, 683.
 — —, lysis, 3635.
 — —, nutrition, 2763, 3205.
 — — on barley, see *Barley*.
 — — on cotton, 158.
 — — on grasses, 2896.
 — — on maize, 741, 3783a.
 — — on *Poa pratensis*, 3353.
 — — on turf, 3355.
 — — on wheat, see *Wheat*.
 — *spicifer* in soil, 49.
 — — on broad bean, 3052.
 — — on cotton, 1662.
 * — — on *Cynodon dactylon*, 3352.
 — — on *Nicotiana rustica*, 1568a.
 — — on rice, 754.
 — *victoriae* in soil, 1966.
 — — on oats, see *Oats*.
 — — producing victorin, 121, 1623.
 — —, separation of diseased isolates, 1932.
Cocksfoot (Dactylis glomerata) diseases, Japan, 179a.
 —, *Erysiphe graminis* on, hosts, 2895.
 —, *Mastigosprium rubricosum* on, 635e.
 — mottle virus on cocksfoot, UK, epidemiology, 180.
 — *Puccinia graminis* on, Kenya, 2406; control, effect on yield, and factors affecting, 1688.
 — streak virus, hosts, 2514.
 * *Coconut (Cocos nucifera), Ascochyta cocaina* on, India, 2966.
 * — broken leaf, Caribbean, 231.
 — bronze leaf wilt, Trinidad, 230.
 — cadang-cadang disease, Philippines, FAO research, 819.
 — coronie wilt, Surinam, symptoms, and ?transmission by vectors, 3564d.
 — diseases, Ghana, 88.
 * —, *Glomerella cingulata* on, India, 2966.
 * —, *Helminthosporium incurvatum* on, Sabah, 329e.
 * —, *Hendersonia palmigena* on, India, 2966.
 — lethal bole rot, E. Africa, *Marasmius* causing, 2286j.
 — — frond drop, Philippines, 1568b.
 — — yellowing, Jamaica, spread, 3564b, c; ?transmission by vectors, 3564b.

[*Coconut*], magnesium deficiency symptoms, 1448.
 —, *Marasmiellus cocophilus* on, E. Africa, description, 1110.
 —, *Marasmius* on, causing lethal bole rot, 2286j.
 —, *Pestalotiopsis palmarum* can infect, 2720.
 * —, *Phoma* and *Phomopsis coconis* on, India, 2966.
 —, *Pythium* and **Rhizoctonia* on, Nigeria, resemblance of symptoms to oil palm blast disease, 2154b.
Cocos nucifera, see *Coconut*.
 Coded 6334 against *Ustilago hordei* on oats, 737.
Coffea, see *Coffee*.
Coffee (Coffea), Armillaria mellea and *Ascochyta tarda* on, Ethiopia, 918.
 — berry disease, see *Glomerella cingulata*.
 — *Cercospora coffeicola* on, 151; *Cape Verde Is., morphological characters and symptoms, 1026.
 —, *Colletotrichum* on, control, 1378b; name preferred to *Glomerella cingulata*, and types of isolates, 1378a.
 — culture in Malawi, 1377.
 — decline disease, India, 1381.
 — die-back, India, biochemical constituents, 1380.
 — diseases, aerial spraying in relation to, 3291; control, 1379.
 * —, *Fomes lignosus* on, Sabah, 329e.
 —, *Glomerella cingulata* on, C. African Rep., 1028; E. Africa, 2286k; Kenya, 152a, 1652, 1653, 2400, 2863a, b, 2864, 3290; Tanzania, 3292; aerial spraying in relation to, 3291; comparison of spraying apparatus, 3292; control, 483, 1028, 1652, 2863a, b, 3288, 3290; effect of Cu, 484, 2400; of foliar nutrients, 1654; of fungicides, 484, 1027; epidemiology, 483; factors affecting, 483, 1653, 2863b, 2864; history and review, 3287; losses, 1028; morphological characters, 1026; natural inhibitor, 3289; spec. react., 1028; spore dispersal by rain, 2863b; sporulating capacity, 152; symptoms, 1026; testing fungicides against, 3288.
 * —, *Hemileia vastatrix* on, Brazil, 3293, 3294, 3295, 3296; Ethiopia, 918; Kenya, 3290; Papua & New Guinea, 1878; Singapore, 3134; control, 16a, 3290, 3295; eradication, 1878; factors affecting, 3295; pathologic histology and morphology of haustoria, 150; spread, 3295.
 —, microflora in rhizosphere, 1381.
 — new disease, India, resembling Elgon dieback in Kenya, 3297.
 — physiological dieback, Ethiopia, 918.
 — root rot, Papua & New Guinea, 1878.
 —, *Rosellinia bunodes* on, Guatemala, review, 485.
 * *Coix gigantea, Helminthosporium coicis* on, India, 1634.
Cola acuminata, see *Kola*.
 Cold water treatment against *Pezicula alba* on apple, 1708.
Coleosporium campanulae on *Adenophora triphylla*, 277.
 — *cimicifugatum* and *C. phellodendri*, hosts, 277.

GENERAL INDEX

Colladonus germinatus and *C. montanus*, transmitting peach western X disease virus, 2797.

Colletotrichum acutatum on pine, 1806, 2286.

- agaves on sisal, 1046.
- *airamentarium* on potato, see Potato.
- on tomato, see Tomato.
- *capsici* on *Capsicum*, 2276, 2277.
- *— — on *Desmodium gangeticum*, 2578.
- —, utilizing monosaccharides, 667a.
- *cocodes* on potato, 1910.
- — on Solanaceae, 716.
- — on tomato, see Tomato.
- — technique for lyophilization of sterile cultures, 393.
- *crassipes* on *Hevea* rubber, 2616b.
- *dematum* on *Hevea* rubber, 2616b.
- — on lily, 2888.
- *gossypii* on cotton, 768b.
- *— *graminicola* on maize, 2846.
- — on sorghum, 1928.
- — on *Sorghum bicolor*, 2057.
- *guaranicola* on *Paullinia cupana* var. *sorbilis*, 228.
- *kruegerianum* on tomato, 3004.
- *lagenarium*, effect of ozone on germination, 671; of temp. on germination and formation of appressoria, 34, 1930.
- — enzymes in conidia and conidial matrix, 361.
- — on melon, 904, 2717.
- — on watermelon, 2717.
- —, principal constituents of conidia, 666.
- *lindemuthianum*, effect of 6-azauracil, 2316; of ozone, 360.
- — on bean, see Bean.
- *musae*, OMI description, 2338.
- —, inhibition by benomyl and thiabendazole, 2314.
- — on banana, see Banana.
- *papayae* on papaw, 3409.
- *spinaciae* on beet, 3555g.
- *tabacum* on tobacco, 558a.
- *trifolii* on lucerne, 2898, 3364.
- *truncatum* on soybean, 3055.

Colloidox against *Hemileia vastatrix*, 16a.

Collybia velutipes on trees and shrubs, 1156.

Colocasia esculentum var. *antiquorum*, *Fusarium solani* on, UAR (Egypt), hosts and morphology, 2280.

Colza (*Brassica campestris* var. *oleifera*), *Leptosphaeria maculans* on, development and spread, 1822.

Comandra umbellata, alternate host of *Cronartium comandae*, 275.

Commelina erecta, source of inoculum of *Pyricularia grisea* on banana, 2135.

Comptonia asplenifolia, *Cronartium comptoniae* on, Canada, 257b.

Conferences, Congresses, Symposia, etc. [see also Reports], American Phytopath. Soc. (61st), 5; (Caribbean Div.), 919; (N.C. Div.), 2028; (N.E. Div.), 3083; (Potomac Div.), 1247, 3565; (S. Div.), 3084; Biology of alder, Washington, 260; (International) Botanical (11th) Seattle, 311; British Insecticide & Fungicide (5th), 2307; British Wood Preserving Ass. Cambridge, 2682; (International on) Chemistry in Agriculture, Bratislava, 3593; Czechoslovak Plant Virologists, Olomouc (1967), 2008; European, on fruit tree virus diseases (7th), Berlin, 2522; European and Mediterranean Plant Protection Organization, 1871; Indian Acad. Sci., Aurangabad, 3082; IIT, Bombay, 326; Interactions between arthropods and plant pathogenic viruses, Tokyo, 2010; Interactions between components of small viruses, Norwich, 2009; Lime induced chlorosis, Kishinev, USSR, 3667; Mediterranean Phytopathological Union, 910; Natural rubber, Malaya, 2165; Non-parasitic plant diseases, Bernkastel-Kues, 913; NSW Association of Nurserymen, 1575; (International on) Pesticide residues, tolerance and intake, Paris, 3594; (International) Phytopharmacy and phytiatry (21st), Netherlands, 2727; Plant breeding, Bangalore, 1577; Plant disease control IARI, New Delhi, 1875; Plant pathology, Canada, 325; Plant protection, Vienna, 912; Potato Ass., Mich., 1969, 1754; Potentials in crop protection, N.Y., 3729; (International on) Protection of sugar beet (2nd), Yugoslavia, 3508; Soil and water pollution damage to terrestrial plants, Washington, 376; (EAAFRO) Yellow wilt of Sugarcane, Nairobi, 2985; Technical significance of air quality standards, Fluoride criteria for vegetation, N.Y., 3750; (4th International) Tobacco Scientific Congress, Athens, 558; Timber preservation, IUFRO, London, 1182; (International for) Virology (1st), Helsinki, 3150; World Forestry (6th), Madrid, 2190; (International on) Yeasts (3rd), Delft—The Hague, 3670.

Coniferae, actinomycete on, forming mycorrhiza, 3611.

- , *Armillaria mellea* on, Canada, 3032.
- , *Cucurbitodothis pithyophila* on, effect of insects on development, 1164.
- , *Cylindrocladium floridanum* on, USA, morphology, previously identified as *C. scoparium*, 1165.
- damping-off, USSR, 3023.
- , *Fomes annosus* on, Canada, 3028; control, 645a; detecting, 3029; distribution, 3028.
- , *Fusarium* on, USSR, 3023.
- mycorrhiza, effect of continuous illumination, 934; review, 24.
- , *Phytophthora* and *P. cinnamomi* on, factors affecting, 1800.
- , *Rhizoctonia* on, USSR, 3023.
- , sensitivity to ozone, 857.
- virus diseases, 2189i.

Coniochaeta velutina on *Acer saccharum*, 859.

Coniophora arida on timber, 2688.

- *— *fusispora* on *Pseudotsuga menziesii*, 257f.
- *puteana* on birch, 3039.
- — on pine, 1809, 3039.
- — on timber, see Timber.

Coniothyrium clematidis-rectae on clematis, 1538g.

- *minitans* inhibiting *Sclerotium cepivorum* on onion, 308a.
- — parasitizing *Sclerotinia sclerotiorum*, 682, 1981.
- *wernsdorffiae* on rose, 499, 500.

GENERAL INDEX

Conium maculatum as source of infection for western celery mosaic virus, 3066.
 — —, celery virus on, serology, 3555m.
Convolvulus, stolbur on, USSR, transmission by vectors, 3172.
 — *arvensis*, mycoplasma-like particles in phloem, 497.
 — —, source of infection for stolbur on *Capsicum*, 2275.
 Copper causing N deficiency in sugarcane, 2984.
 —, effect on cellulose decomposition by fungi, 366; *Glomerella cingulata* on coffee, 2400; *Phytophthora palmivora* on black pepper and *Piper betle*, 1447; *Synchytrium endobioticum*, 1456.
 — chrome arsenate as timber preservative, 2682b.
 — — —, effect on wood-destroying fungi, 2682e.
 — fungicides against *Acroconidiella trophaeoli* on *Tropaeolum majus*, 1685; *Cercospora beticola*, 1828; *Colletotrichum* on coffee, 1398b; cotton boll rot, 3298c; *Fusarium* and *Gibberella fujikuroi* on *Sansevieria*, 3350; *Gloeosporium psidii* on banana and papaw, 2940; *Glomerella cingulata* on coffee, 1028; *Hemileia vastatrix*, 3290; *Marasmus equicrinis* and *M. scandens* on cacao, 3562a; *Marssonina salicicola* on *Salix alba*, 3490; *Oidium begoniae* on begonia, 3322; *Phytophthora nicotianae* var. *parasitica* on *Piper betle*, 535; *Plasmopara viticola*, 223, 3593a; pome fruit bark disease, 2534; *Pseudoperonospora humuli* on hop, 1747; *Pseudopeziza tracheiphila* on grapevine, 2569; *Scirrhia pini* on pine, 854e, 1805b, 2286m; *S. pini* on *Pseudotsuga menziesii*, 854e; *Septoria apicula* on celery, 2282k; *Sphaceloma perseae* on avocado pear, 2140; *Xanthomonas malvacearum*, 160; *X. oryzae* on rice, 472.
 — —, effect on *Glomerella cingulata* on coffee, 484.
 — oxide against *Pyricularia oryzae*, 1645.
 — — deposits, factors affecting, 3079b.
 — oxychloride against *Cronartium ribicola* on currant and gooseberry, 213; *Exobasidium vexans*, 2170e; *Peronospora manshurica* on soybean, 1521; *P. tabacina*, 250; *Phoma urens* on poplar, 270; *Phomopsis vexans* on eggplant, 2722; *Phytophthora* on *Hevea* rubber, 831; *P. palmivora* on orange, 2483; *Pseudopeziza ribis* on currant, 2925; *Pyricularia oryzae*, 1645; *Uromyces dianthi* on carnation, 169; as timber preservative, 1814.
 — —, effect on *Phytophthora infestans* on potato, 1761.
 — —, interaction with thiram, 3599.
 — oxyquinolase as seed treatment for cereals, 2307k.
 — sandoz against *Alternaria tenuissima* on *Capsicum*, 631; *Corynespora cassicola* on sesame, 2960.
 — sulphate against *Agrobacterium tumefaciens* on grapevine, 1446; *Corynebacterium michiganense* on tomato, 1787; *Cryptosporiopsis corticola* on apple, 2112; *Gloeosporium foliicola* on citrus, 2073; as timber preservative, 589.
 [Copper sulphate], effect on *Phytophthora* on tomato, 3483; wood destroying fungi, 2682e.
 — — for isolating symbiotic fungi, 2746.
 — — trichlorophenol as seed treatment for tobacco, 250.
 Coprantol against *Erysiphe cichoracearum* on squash, 1239.
Coprinus comatus, antibacterial activity of mycelia, 3607b.
Corchorus capsularis and *C. olitorius*, see *Jute*.
 — *fascicularis*, *Xanthomonas nakatae* var. *fascicularis* on, India, cultural characters and morphology, 2083.
Cordana musae on banana, 3402.
Cordia alliodora, *Puccinia cordiae* on, Trinidad and Tobago, 2657.
Coriander (Coriandrum sativum), *Alternaria poonensis* on, factors affecting, 226.
 *—, *Cercospora coriandri* on, India, 815.
 —, cucumber mosaic virus on, 2008f.
 —, *Fusarium oxysporum* f.sp. *coriandri* on, India, inoculum potential, 2953.
 *—, *Glomerella cingulata* on, India, morphology, 816.
 — mild yellows virus proposed as name for coriander virus CS5, 3555k.
 —, *Protomyces macrosporum* on, effect on viability of seed, 1106b; survival in soil, 1106a.
 —, *Ramularia coriandri* on, 225.
 — seed treatment, effect of fungicides, 3426.
 — viruses CSR and CS5, 3555k.
 —, western celery mosaic virus on, UK, 3066, *3555k; *Conium maculatum* as source of infection, 3066.
Cornus, USA, sensitivity to ozone, 857.
Coronilla varia, effect of ozone, 1061.
Corticium bicolor on spruce, forming mycorrhiza, 3611.
 — *fuciforme* on *Lolium perenne*, 635e.
 — *invisum* on tea, 2628.
 — *rolfsii*, effect of calcium cyanamide, 1553b; of CO_2 and O_2 on mitochondria, 368; of fungicides, 2727n; of herbicides on germination of sclerotium, 3103; of hormones on growth, 2753; of medium on respiration, 3114.
 — —, electron microscopy of surface structure of sclerotia, 2453.
 — —, enzymatic degradation of galactan, galactomannan and xylan, 37.
 — —, hosts, 3074.
 — — in soil, 1066, 2773.
 — —, morphogenic factor for sclerotia, 1275.
 *— — on *Alternanthera amoena*, 167.
 — — on bean, 2700.
 — — on beet, 289, 290, 3423.
 — — on cauliflower, 3731a.
 — — on clover, 782.
 — — on cotton, 1029.
 — — on *Datura innoxia*, 3423.
 — — on eggplant, 3074.
 — — on onion, 2727n.
 — — on radish, 3731a.
 — — on wheat, 3211.
 — — on *Zinnia*, 3423.
 — —, physiological studies, 367, 1942.
 — — producing arabanase, 1274.
 — —, ultrastructure of sclerotia and hyphae, 390.

GENERAL INDEX

*[*Corticium*] *salmonicolor* on *Durio zibethinus* 1173d.
 — — on *Hevea* rubber, 831.
 — — on *Ricinus communis*, 3562i.
 — — *sasakii* on rice, 3269, 3798.
 — — *solani*, accumulating quinotone, 1277.
 — —, adaptation to fungicides, 3601.
 — —, anastomosis grouping among isolates, 388.
 — — control, 3593i.
 — —, effect of carboxin and oxycarboxin, 3102; of fungicides, 2727n; of plant excretions, 1964; of soil treatment, 2727l.
 — —, electron microscopy of surface structure of sclerotia, 2353.
 — —, factors affecting growth and respiration, 3649.
 — —, formation of perfect state, 962, 963.
 — —, genetics, 389.
 — —, *Gliocladium roseum* on, 51.
 — —, growth limitation, 3621.
 — —, hosts, 1569a, 3600.
 — —, hyphal fusion and nuclear condition, 963.
 * — —, Italy, 1569a.
 — — in rhizosphere of lucerne, 3363.
 — — in soil, see Soil.
 — —, meta-hydroxylation of phenylacetic acid, 3648.
 — —, morphology, 962, 2000.
 — — on bean, see Bean.
 — — on beet, see Beet.
 — — on *Begonia*, 2085.
 — — on cantaloupe, 623.
 * — — on *Celosia cristata*, 85a.
 * — — on Chinese mustard, *1188, 3562i.
 — — on cotton, see Cotton.
 — — on cucumber, 3543.
 — — on *Euphorbia pulcherrima*, 2886.
 — — on field crops, 1297.
 — — on flax, 2878.
 * — — on *Gaillardia* and *Hibiscus esculentus*, 85a.
 — — on *H. sabdariffa* var. *altissima*, 2082.
 — — on *Lotus corniculatus*, 510.
 — — on lucerne, 1411.
 — — on maize, 2844.
 — — on *Musa textilis*, 3562h.
 — — on parsley, 2256.
 — — on *Phaseolus aureus*, 2236a, b, 2704.
 — — on pine, 661, 1167.
 — — on potato, see Potato.
 * — — on *Salvia splendens*, 501.
 — — on tomato, 566, 1781c.
 — — on tulip, 2727k.
 — — on turf, 3355.
 — — on vanilla, forming mycorrhiza, 1107.
 — — on vegetables, causing damping-off, 3188.
 * — — on wheat, 2428.
 — — on *Zinnia*, 85a.
 — —, physiology, 2000.
 — —, production of proteolytic enzymes, 1939.
 — —, translocating glucose, 369.
Corylus avellana, 'filbert stunt' disease, USA, 2194.
 — — mycorrhiza, Poland, 3616.
 — —, *Tuber aestivum*, *T. brumale* and *T. melanosporum* on, forming mycorrhiza, 3615.
 — — *columna* mycorrhiza, Poland, 3616.
Coryne sarcoidea on pine, 1809.
 — — on spruce, 585.
Corynebacterium beticola on beet, a new sp., 1197.
 — — *fascians* on *Begonia*, 2085.
 — — on pea, 897.
 * — — on **Petunia* and **tobacco*, 1320.
 — — *insidiosum* on lucerne, 186, 2728b, 3556f.
 — — *michiganense* in soil, 3585.
 — — on tomato, see Tomato.
 — — *oortii* on tulip, 1392.
 — — *sepedonicum* utilizing methionine, 2285k.
 — — str. 51, bacteriophages, 925.
 — — *tritici* on wheat, 445, 918.
Corynespora cassiicola on banana, 919c.
 — — on cucumber, 919c, 2264.
 — — on papaw, 1740a.
 — — on sesame, 2960.
Coryneum beijerinckii, see *Stigmina carpophila*.
 * — — *cardinale* on *Thuja orientalis*, 2203.
 Cosan against *Sphaerotheca pannosa* on peach, 2551.
Cotinus coggygria, phycomycete on, forming mycorrhiza, Poland, 3617.
Cotoneaster, *Botrytis* on, 2b.
Cotton (*Gossypium*), *Alternaria* on, Qd, 1029; Zambia, 636c; associated with boll rot, 103c; control, 1029.
 — — *alternata* on, Iran, 1664.
 — — *citrina* on, control, 158.
 — — *tenuissima* on, Iran, 1664.
 — — anthocyanosis virus on cotton, effect of tobacco streak virus, 762.
 — — *Ascochyta* on, Zambia, 636c.
 — — *gossypii* on, Qd, 1029.
 — — *Aspergillus candidus*, *A. flavus* and *A. fumigatus* on, Iran, 1664.
 — — *niger* on, C. African Repub., resistance, 3298a; Iran, 1664.
 — — *wentii* on, Iran, 1664.
 — — blue disease, C. African Repub., ?virus causing, 3298a.
 — — boll rot, C. African Repub., 3298a; Ivory Coast, 3298c; Taiwan, 2079; USA, 3312; control, 2079, 3298c; *Diplodia gossypina* associated with, 488; effect of floral bracts, 488, 1663; *Erwinia herbicola* associated with, 3312; factors affecting, 3298a; fungi associated with, 1030, 1383, 2077; insects in relation to, 2079; microscopic observation, 1383.
 — — boron deficiency, C. African Repub., symptoms, 1665.
 — — *Botrydiploidia theobromae* on, C. African Repub., resistance, 3298a.
 — — *Cephalosporiopsis* on, associated with boll rot, 1030.
 — — *Cercospora* on, Zambia, 636c.
 — — *gossypina* on, Qd, distribution and symptoms, 1029.
 — — *Cochliobolus sativus* on, control, 158.
 — — *spicifer* on, hosts, 1662.
 — — *Colletotrichum* on, diversity in forms, 768a.
 — — *gossypii* on, 768b.
 — — *Corticium rolfsii* on, Qd, distribution and symptoms, 1029.
 — — *solani* on, 649; Iran, 1664; Qd, 1029; control, 159, 160, 1029, 1040, 1659, 2078, 3310; effect of exudation, 1382; of nutrition on virulence, 1038; factors affecting, 1382; producing cellulolytic and pectic enzymes, 3310.

GENERAL INDEX

[Cotton] degrading vitavax, 1041.
 — diseases, Ghana, 88; Qd, 1029; synergistic effect of nematodes, 2874.
 —, *Erwinia herbicola* on, USA, causing boll rot, 3312.
 —, *Escherichia coli* on, antagonism of actinomycetes in rhizosphere to, 161.
 —, fungi on, control, 160.
 —, — in rhizosphere, effect of seed and root exudates, 379.
 —, *Fusarium* on, Argentina, Cambodia and Togo, 1664; associated with boll rot, 1030; control, 1660; factors affecting and var. react., 3306.
 —, — *culmorum* on, control, 158.
 —, — *orthoceras* on, antagonism of actinomycetes in rhizosphere, 161.
 —, — *oxysporum* on, Iran, 1664; morphological characters, 66.
 —, — f.sp. *apii* on, 422.
 —, — — *vasinfectum* on, 422, 1034; Brazil, 2869; amino acid content in resistant and susceptible plants, 2871; biology, 155; control, 155, 158; effect of bacteria in roots, 2873; of cobalt, 1033; of phenols, 3308; of plant remains, 1032; effect on mineral content, 2872; factors affecting, 3309; morphology and pathogenicity, 1031; physiology, 155; pigments associated with defruited plants, 3307; red leaf technique for recording incidence, 761; resistance, 2080; selecting resistant vars., 2869; studying relations between, 2870; testing resistance, 2487.
 —, — *solani* on, control, 158.
 —, *Gibberella fujikuroi* on, Iran, 1664.
 —, — *zeae* on, control, 158.
 —, *Glomerella* on, diversity in forms, 768a.
 —, — *cingulata* on, C. African Repub., 3298a.
 —, — *gossypii* on, 768a; C. African Repub., 3298a; associated with boll rot, 1030; resistance, 3298a.
 —, internal fluorescence, USA, 3301.
 —, *Khuskia oryzae* on, control, 158.
 —, leaf curl virus on cotton, review, 2485; technique for vector transmission, 3300.
 —, *Macrophomina phaseoli* on, effect of organic amendments, 487; pycnidial formation, 65.
 —, microflora in rhizosphere, 1034.
 —, *Myrothecium roridum* on, India, 1661.
 —, peach virus can infect, 3565d.
 —, *Phytophthora omnivorum* on, control, 3311a; effect of sclerotial inoculum density, 3311b.
 —, *Physalospora rhodina* on, Taiwan, 2079; control, 2078, 2079.
 —, producing methyl-2-benzimidazole carbamate, 1042.
 —, *Pseudomonas solanacearum* on, antagonism of actinomycetes in rhizosphere, 161.
 —, *Pythium* on, Qd, 1029; control, 1029, 1660.
 —, *Rhizoctonia* on, control on, 1660.
 —, seed treatment, C. African Repub., 3298a; Dahomey, 3298d; Ivory Coast, 3298c; Mali, 3298b.
 —, soil micro-organisms, colonization of roots, 769.
 —, tobacco mosaic virus on, subliminal infection, 2076.
 [Cotton, tobacco] ringspot virus str. on, inoculating, 3299.
 —, — streak virus on, effect on cotton anthocyanosis virus, 762.
 —, translocation of chloroneb and vitavax in, 1039.
 —, *Verticillium* can infect, 984.
 —, — on, antagonism of *Trichoderma viride*, 681; associated with boll rot, 1030; control, 92, 1657; effect of *p*-chloroformanilide, 1036; factors affecting, 3306; genetics, 157; resistance, 2489; spec. react., 1037; var. react., 3306.
 —, — *albo-atrum* on, 649; conidia, electron microscopy, 154; defoliation by and growth regulator changes, 3305; effect of heat treatment, 153c; of temp. on resistance and phytoalexin synthesis, 153b; enzyme synthesis by haploid and diploid forms, 2866; factors affecting growth, 3304; genetics of resistance, 2488, 2865; obtaining xylem fluid from, 2081; phytoalexin production, 153a; polygalacturonase production, 2325, 3303; resistance, 153a, 534; separating str., 1656.
 —, — *dahliae* on, C. Asia, 486; Iran, 766; Qd, 1029; auxotrophic variant, 486; biology, 155; control, 155, 156, 158, 1029, 1658, 2867; effect on proteins, 3302; factors affecting, 1035; non-detection in seed, 766; physiology, 155; properties of toxins, 767; review, 2868; var. react., 1035.
 —, — *nigrescens* on, conidia, electron microscopy, 154; factors affecting growth, 3304; polygalacturonase activity and cultural characteristics, 3303.
 —, virescence, French W. Africa, 1655a; Upper Volta, economic importance, 763; epidemiology, 1655a; mycoplasmas causing, 764, 765; transmission, 1655b.
 —, wilt, USA, *Fusarium*-nematode complex causing, 2875; papers on, 155.
 —, *Xanthomonas* on, 489.
 —, — *malvacearum* on, C. African Repub., 3298a; India, 2877; Ivory Coast, 3298c; Mozambique, 1384; Qd, 1029; Sudan, 2490; Tanzania, 761a; alteration of host specificity, 2492; antagonism of actinomycetes in rhizosphere, 161; control, 160, 1029, 1043, 3313; distribution, 1029; factors affecting, 761a, 1384, 3095; genetics, 1384, 2876; inoculating, 3298c; pathogenicity, 2077; pigments associated with defruited plants, 3307; physiologic races, 2491, 3314; resistance, 328d, 3298a; review, 2490; var. react., 761a, 1384; virulence, 2877.
 Courgette (*Cucurbita pepo*), mycoflora on roots, Lebanon, 716.
 Coversan as seed treatment for maize, 3249.
 Cowpea (*Vigna unguiculata*), bean mosaic virus on, 910i.
 —, — southern mosaic virus cowpea str. on, genetics of resistance, 3056.
 —, C virus, cowpea veinbanding virus proposed as name, particle size and transmission, 2286f.
 —, cacao swollen shoot virus on, 721a.
 —, *Cercospora* on, Guyana, evaluating chemicals against, 3560e.

GENERAL INDEX

[Cowpea, *Cercospora*] *cruenta* on, UAR (Egypt), morphology and pathogenicity, 2245.
 — chlorotic mottle virus on cowpea, effect of actinomycin D on multiplication, 3157; RNA synthesis, 3156.
 —, cucumber mosaic virus on, 1478; effect on epidermal cells, 1565, 2378; proteinaceous inhibitors, 1312.
 —, *Erysiphe polygoni* on, biology, 1852; control, 3057; stages of infection, 2246.
 —, legume little leaf disease on, electron microscopy and relationship with mycoplasma-like bodies, 2798.
 —, *Macrophomina phaseoli* on, factors affecting, 1576.
 —, mosaic virus, antigenic links, 2008a.
 — — —, conversion of electrophoretic forms, 605.
 — — —, demonstration, 1538m.
 — — — on bean, 3157.
 — — — on cowpea, Puerto Rico, 2710; effect of actinomycin D, 3157; effect on host and on ethylene production, 2709; resemblance to Ark. cowpea mosaic virus and transmission by vectors, 2710.
 — — — yellow str., transmission by vectors, 2286f.
 —, *Mycosphaerella cruenta* on, India, hosts, 606.
 —, tobacco mosaic virus on, effect of actinomycin D, 3157; electron microscopy, 404.
 —, — rattle virus can infect, 3321.
 — veinbanding virus proposed as name for cowpea C virus, 2286f.
 — virus, effect of extracts from basidiomycetes, 3697.
 — diseases, UAR (Egypt), differentiation, 2244.
 —, *Xanthomonas vignicola* on, 1853.
 **Crambe abyssinica*, *Alternaria* on, Poland, 2148.
 — — — *brassicicola* on, USA, effect on seed, 2149.
 — — —, *Fusarium* on, Poland, pathogenicity, 2147; USA, 2149.
 — — —, *Sclerotinia sclerotiorum* on, USA, 2149.
 — — —, tobacco mosaic virus U1 str. and tobacco necrosis virus str. 6 on, symptomless host, 3703.
Crataegus, source of infection for *Erwinia amylovora*, 792.
 *—, *Erwinia amylovora* on, Denmark, 3081.
 ORD 68-5252 as seed treatment for cotton, 3298d.
 Creosote against *Armillaria mellea* on ash, elm and yew, 1157; as soil treatment, 1426; as timber preservative, 587, 2691, 2692.
 o- and p-cresol against *Cercospora beticola*, 1830.
Cristulariella depraedans on *Acer pseudoplatanus*, 2189f.
 — *pyramidalis* on *Hibiscus cannabinus*, 770.
Crocus, *Pythium* and *Sclerotinia gladioli* on, causing root rot, 3333.
Cronartium comandae on pine, 274, *275, 2209.
 — — —, technique for sampling spores, 1803.
 — *comptoniae* on *Comptonia asplenifolia*, 257b.
 — *Cronartium comptoniae* on pine, 2209.
 — *fusiforme* on pine, 580, 2674.
 — — —, technique for sampling spores, 1803.
 — *quercuum* on pine, 872.
 — *ribicola* on currant and gooseberry, 213.
 — — — on pine, see Pine.
 Crops, tropical, pests and diseases, Engl. ed. of German book, 3575.
Crotalaria mosaic virus on *Chenopodium amaranticolor*, 417.
 — — — on *Cyamopsis psoraloides*, 3176.
 — *junccea*, *Pythium debaryanum* can infect, 3061.
 — — —, sunn-hemp mosaic virus on, accumulation of radioactive P, 3719.
Croton plandianum, mycoflora in rhizosphere of healthy and virus infected plants, 3715.
Crotothane against *Sphaerotheca pannosa* on peach, 2551.
 Crown gall, see *Agrobacterium tumefaciens*.
 **Cruciferae*, *Peronospora parasitica* on, Norway, 3502.
 —, *Plasmodiophora brassicae* on, NSW, control, 2728g; effect of overhead irrigation, 1318.
Crumenula sororia, *Digitosporium piniphilum* conidial state of, 1808.
 — — — on trees, 2189h.
Cryptodiaporthe populea on poplar, 1492, 1796.
 — *salicella* on *Salix*, 3133.
Cryptosporella eugeniae on clove, 64.
Cryptosporiopsis corticola on apple, 2112.
Cucumber (*Cucumis sativus*), *Ascochyta melonis* on, str., 629.
 —, *Aspergillus*, basidiomycete, and *Botrytis* in rhizosphere, 1240.
 —, cassava mosaic virus on, India, transmission by vectors, 2262.
 *—, *Cladosporium cucumerinum* on, Iran, 1320.
 —, *Corticium solani* on, control, 3543.
 —, *Corynespora cassiicola* on, 919c; USA, var. react., 2264.
 — diseases, control, 1547.
 —, *Erysiphe cichoracearum* on, USA, 2264; control, 313, 1239; var. react., 2264.
 —, — *polygoni* on, control, 1269, 3602.
 —, — *polyphaga* on, 1845.
 —, *Fusarium* in rhizosphere, 1240.
 —, — on, control, 627.
 — green mottle mosaic virus on *Lagenaria siceraria*, 624.
 — mosaic virus, CMI/AAB description, 3151.
 — — —, determination of molecular mass, 706.
 — — —, effect of extracts from basidiomycetes, 3697.
 — — —, USSR, overwintering and transmission by vectors, 1236.
 — — — on *Asparagus*, 309.
 — — — on *Buddleia davidii*, 3323.
 — — — on *B. nivea*, 771.
 — — — on cantaloupe, 623.
 — — — on *Capsicum*, see *Capsicum*.
 — — — on carrot, 3065.
 — — — on celery, 1858.
 — — — on *Cicer arietinum*, 1519.
 — — — on coriander, 2008f.

GENERAL INDEX

[Cucumber mosaic virus] on cowpea, 1312, 1565, 2378.
 — — — on cucumber, 2263; effect on chlorophyllase activity, 3541; var. react., 2285a.
 — — — on Cucurbitaceae, 622.
 — — — on currant, 2130.
 — — — on *Delphinium*, 3334.
 — — — on eggplant, 1243.
 — — — on *Gladiolus*, 2088.
 — — — on lettuce, 3555i.
 — — — on lily, 498.
 — — — on lucerne, 1063, 1064, 2520.
 — — — on *Lycium halimifolium*, 3721.
 — — — on melon, 1.
 — — — on *Nicotiana rustica*, 3555o.
 — — — on pumpkin, 2023.
 — — — on *Ranunculus asiaticus*, 910f.
 — — — on squash, 312.
 — — — on *Stellaria media*, 2261.
 — — — on tobacco, see Tobacco.
 — — — on weeds, 3555i.
 — — —, preservation of infectivity, 409.
 — — —, serological relationship with groundnut stunt and tomato aspermy viruses, 2022.
 — — —, technique for detecting virus particles, 396.
 — — —+tobacco mosaic virus on tobacco, 3470; intranuclear inclusions, 2634.
 — — —+ — on tomato, 1485.
 — — — Y, effect on CO₂ fixation, 3698.
 — — — on *Nicotiana glutinosa*, 3168.
 —, mycoflora on roots, Lebanon, 716.
 —, necrosis virus in soil, 1308.
 — — —, transmission by *Olpidium brassicae*, 1307; by vectors, 324x.
 —, necrotic spot virus on *Capicum*, 3547.
 —, *Oidium* on, control, 1898.
 —, *Penicillium* in rhizosphere, 1240.
 —, *Phomopsis sclerotoides* on, Germany (W.), control, 2266, 2282k; infested soil in relation to, 2282k; predicting rate of spread, 909c.
 —, *Phytophthora drechsleri* on, Iran, 1530.
 —, plum virus can infect, 2524.
 —, prune dwarf and *Prunus* necrotic ringspot viruses on, indicator for, 3383.
 —, *Pseudomonas lachrymans* on Germany (E.), 2284; *Iran, 418; Italy, 2267; USSR, 1859; causing leaf spot, 315; control, 2267, 3544; factors affecting, 3095; symptoms, 2267.
 —, — *syringae* on, symptoms, 2299.
 —, *Pseudoperonospora cubensis* on, Iran, 3735a; USA, 2264; control, 2265; factors affecting sporulation, 1532; resistance and var. react., 2264.
 —, *Pythium* on, control, 627, 3543.
 —, — *aphanidermatum* on, control, 3543.
 —, — *butleri* on, 1862.
 —, — *debaryanum* on, effect of 6-azauracil, 3068.
 —, seedborne fungi on, control, 3542.
 —, *Sphaerotheca fuliginea* on, control, 2263, 2308b, 3069; effect of viruses, 2263.
 —, tobacco mosaic virus on, factors affecting, 3158.
 —, — rattle virus can infect, 3321.
 —, tomato black ring virus on, transmission by vectors, 3701.
 —, — ringspot virus can infect, 1399.
 —, *Trichoderma* in rhizosphere, 1240.
Cucumis melo, see Melon.
 — — var. *cantaloupina*, see Cantaloupe.
 — *sativus*, see Cucumber.
Cucurbitodothis pithyophila on Coniferae and larch, 1164.
Cucurbita maxima, see Squash.
 — *pepo*, see Courgette, Pumpkin, Vegetable marrow.
Cucurbitaceae, *Cercospora citrullina* on, Malaysia, study, 2805.
 —, *Chaetomium* and *Cladosporium* on, 659.
 —, cucumber mosaic virus on, Qd, 622.
 —, *Curvularia* on, 659.
 —, papaw mosaic and ringspot viruses can infect, 1740b.
 —, *Pyrenophaeta lycopersici* on, Lebanon, 716.
 —, *Pythium ultimum* on, biology, 2716.
 —, *Rhizopus* on, 659.
 —, squash mosaic virus on, Queensland, 622.
 — virus diseases, 2008c.
Cucurbitaria caraganae on *Caragana arborescens*, 3627.
 ?— *piceae* on spruce, 2282d.
Cufraneb, effect on *Sclerotinia squamosa* on onion, versus benomyl and mane, 1524.
 Culture collection catalogue, Japanese, 971; Tropical Prod. Inst., 970.
 Cultures, legislation for packaging and shipping in USA, 2292.
 Cuman against *Alternaria burnii* on cumin, 817; *Diplodia natalensis* on mango, 2941.
 Cumin (*Cuminum cyminum*), *Alternaria burnii* on, control, 817.
 —, *Fusarium oxysporum* f.sp. *cumini* on, Iran, control, 2952; inhibition by *Bacillus subtilis*, 818; pathogenicity and symptoms, 2952.
 — seed treatment, effect of fungicides, 3426.
Cunninghamella echinulata not affecting seed germination, 48.
 — *elegans* inhibited by *Fusarium oxysporum* filtrate, 1924.
 Cupral 45 against *Plasmopara viticola* and toxicity to grapevine, 2567.
 Cupravit against *Peronospora parasitica* on Indian mustard, 1823; *Phytophthora palmivora* on cacao, 423.
 — toxicity to Cucurbitaceae, 2717.
Cupressus, *Phomopsis juniperovora* on, USA, resistance in epidemics, 2673.
 —, *Poria hypobrunnea* on, E. Africa, 2286n.
 *— *arizonica*, *Kabatina thujae* on, France, causing dieback, 3500.
 — *lusitanica*, *Monochaetia unicornis* on, E. Africa, str., 1801.
 Cupric, see Copper.
 Cuprinol as timber preservative, 589.
 Cuprofix against *Plasmopara viticola*, 223.
 Cuprosan against *Blumeriella jaapii* on cherry, 2127; *Phytophthora infestans* on potato, 826; as soil treatment, 1784.
 — *ultra* against *Botrytis cinerea* on grapevine, 2570.
 Cuprous, see Copper.
 Cuprozineb against *Cycloconium oleaginum* on olive, 3413.
Curcuma longa, see Turmeric.

GENERAL INDEX

Currant (*Ribes* spp.); *Arabis* mosaic virus on, detecting, 2523f.
 —, blackcurrant reversion virus on, hypersensitivity, 2557.
 —, *Cronartium ribicola* on, USSR, 213.
 —, cucumber mosaic virus on, Advis. Leafl. on aphid vectors, 2130.
 —, diseases, control, 1547; effect of fungicides, 2725j.
 —, *Microsphaera grossulariae*, Advis. Leafl., 1731.
 —, *Mycosphaerella ribis* on, USSR, 1092.
 —, *Pseudopeziza ribis* on, USSR, 2558, 2925; control, 214, 2925, 2307q, 3079c; effect of fungicides, 214; var. react., 2558.
 —, *Sphaerotheca mors-uvae* on, Germany (E.), 2559; control, 2307r, s, 2559, 2926, 3079c; effect of fungicides, 351a; overwintering, 2559; var. react., 2927.
 —, tobacco mosaic virus on, 2556.
 —, virus diseases, review, 2924; Russian manual, 3397.
Curvularia ergrostidis on oil palm, 3562g.
 —, *lunata*, see *Cochliobolus lunatus*.
 —, *lunata* var. *aeria* on mango, 3638.
 —, — on tomato, 1488.
 —, *ovoidea* on *Capsicum*, 3549, 3638.
 —, *pallescens*, effect of $MgSO_4$ on growth and sporulation, 944.
 —, — on eggplant, 3636.
 —, — on turf, 2515.
 —, *trifolii* on clover, 179b.
 —, f.sp. *amaryllidis*, *Curvularia* on *Amaryllis* tentatively named, 919a.
 —, *tuberculata* in soil, 3665.
 —, oligosaccharide synthesis, 943, 3637.
 —, — on sorghum seed, 2848.
Cuscuta, see Dodder.
 Custard apple (*Annona reticulata*) diseases, India, 87.
Cyamopsis psoraloides, *Alternaria*, *Aspergillus* and *Cephalosporium* on, control, 1855.
 —, *Crotalaria* mosaic virus on, local lesion formation, 3176.
 —, *Dolichos* enation mosaic virus on, effect on respiration, 901; local lesion formation, 3176.
 —, *Fusarium* on, control, 1855.
 —, *Pythium debaryanum* can infect, 3061.
 —, — *myriotylum*, India, 86.
 —, *Rhizopus* on, control, 1855.
 —, soybean mosaic virus can infect, 3528.
 —, *Xanthomonas cyamopsis* on, USA, new virulent race, 2249.
 Cyanide associated with *Stemphylium loti* on *Lotus corniculatus*, 2102.
Cycloconium oleaginum on olive, 1441, 3413.
 Cycloheximide against *Didymascella thujina* on *Thuja plicata*, 2308o.
 —, effect on tobacco mosaic virus on tobacco, 843.
 —, toxicity to tea, 1133.
 Cyclomorph against *Erysiphe graminis* on barley, 2307e.
 4-(1-cyclopentylpentyl)-2,6-dinitrophenol against *Podosphaera leucotricha* and *Venturia inaequalis*, 3374.
 Cycocel, effect on wheat, 2829.
Cydonia, *Erwinia amylovora* on, resistance, 1721.
 —, *oblonga*, see Quince.
Cylindrocarpon panacis on ginseng, 229.
Cylindrocladium avesiculatum proposed as name for *C.* on holly, 3084b.
 *— *crotalariae* on *Liriodendron tulipifera*, 3016.
 —, *floridanum* on Coniferae, 1165.
 —, — on *Liriodendron tulipifera*, 3016.
 —, *scoparium*, *C.* on *Mahonia bealei* different from, 3084g.
 —, —, *C. floridanum* previously identified as, 1165.
 —, — in soil, 3126.
 *— — on *Azalea*, 3081.
 —, — on *Liriodendron tulipifera*, 3016.
 —, — on lucerne, 3364.
 **Cylindrosporium castaneae* on chestnut, 3736.
 *— *pomi* on quince, 1717.
Cymadothea trifolii on clover, 1059.
Cymbidium mosaic virus in relation to *Cattleya* flower necrosis, 2092.
 —, — on *Cattleya*, 1247c.
 —, — on orchid, 778, 3344.
Cynara cardunculus, *Leveillula taurica* on, UK, 1389.
 —, *scolymus*, see Artichoke.
Cynkomiedzian against *Cercospora beticola*, 1832.
Cynkotok against tomato diseases, 1148.
 **Cynodon dactylon*, *Cochliobolus spicifer* on, control, 3352.
 —, —, *Pyricularia oryzae* on, Malaya, 3561a.
 Cypress, see *Cupressus*.
 —, bald, see *Taxodium distichum*.
Cyprex 65-W against *Venturia inaequalis*, 2285j.
Cystotheca, geographical distribution and host range, 2344.
 Cytokinins, role in pathogenesis, 1947.
Cytospora abietis on *Abies concolor* and *A. magnifica*, 1166.
 —, *capitata* on apple, 1080.
 —, *schulzeri* on apple, 2111.

 1,3-D as soil treatment, 895.
 Daconil against barley diseases, 2435; *Cladosporium fulvum*, 2653; *Glomerella cingulata* on *Hevea rubber*, 831; *Pseudopeziza ribis* on currant, 2307q; *Septoria apicula* on celery, 3540; *Uromyces appendiculatus*, 3565e.
 —, injury to citrus, 2075.
 —, 2787 against *Alternaria solani* on potato, 2604; *Botrytis cinerea* on tomato, 321a; *Mycosphaerella brassicicola* on Brussels sprouts, 2218; *Phytophthora infestans* on potato, 1537l; on tomato, 321a; *P. nicotianae* var. *parasitica* on *Bougainvillea*, 3084a.
Dactylariopsis brochopaga on *Elaphostylus panticola*, 348.
Dactylis glomerata, see Cocksfoot.
 **Dactyloctenium aegyptium*, *Helminthosporium holmii* on, India, cultural characters and morphology, 2894.
 —, — *rostratum* on, India, hosts and pathogenicity, 1689.
 —, —, *Pythium acanthicum* in rhizosphere, Guam, 2774.

GENERAL INDEX

Dactylomyces crustaceus on barley, stored, 1347, 2835a.
Dactylorhiza purpurella mycorrhiza inducing DNA synthesis, 3618.
Dactylodon dendroides on mushroom, 1869.
Daffodil, see *Narcissus*.
Dahlia, *Entyloma calendulae* f.sp. *dahliae* on, epidemiology and pathogenesis, 1050a, b.
—, *Erwinia chrysanthemi* on, incidence, 1392.
—, extracts inhibiting watermelon mosaic virus, 311.
—, mosaic virus on *Verbesina encelioides*, 909m.
— — — on *Zinnia*, 3177.
—, tobacco streak virus on, transmission by seed, 909m.
Daikon mosaic virus on tobacco, proteinaceous inhibitors, 1312.
Dalbulus eliminatus, mycoplasma in, 739, 3239, 3240.
— — — transmitting maize stunt disease, 1247a.
— *maidis*, mycoplasma in, 739.
— — — not transmitting maize stunt disease in Ohio, 459.
— — — transmitting maize 'rayado fino' virus, 1349; maize stunt, 5d, 1350.
Damping-off of aster, 960; clover, 504; *Coniferae*, 3023; *Cucurbitaceae*, 1530; *Hibiscus sabdariffa* var. *altissima*, 2082; lucerne, 504; pea, 960, 3048; *Phaseolus aureus*, 2704; pine, 1167, 2674; *Pseudotsuga menziesii*, 1178; subterranean clover, 2728; vegetables, 3188; vetch, 2728d.
Date palm (*Phoenix dactylifera*), *Fusarium oxysporum* f.sp. *albedinis* on, resistance, 3431.
—, *Mycosphaerella tassiana* on, Morocco, causing brown blotch, perfect state, 1449.
Datura fastuosa, *Mycosphaerella cruenta* on, India, 606.
— *innoxia*, *Corticium rolfsii* on, India, 3423.
— — and *D. metel* diseases, 814.
— *metel*, potato virus Y on, properties and transmission by vectors, 821.
— *stramonium* as indicator for tobacco etch virus, 2990.
—, *Belladonna* mottle virus on, properties, 707.
—, clover phyllody on, mycoplasma-like organisms in, 1315.
— — diseases, 814.
—, potato leaf roll virus on, particle size, 3443.
—, — virus X on, 2017, 3439; electron microscopy, 408; infectivity of RNA from tissues, 2018; ultrastructure, 40.
—, —, rape green petal disease can infect, 3041.
—, —, RNase activity in relation to virus inhibition, 401.
—, —, *stolbur C & SM* on, mycoplasma-like organisms in, 1315.
—, —, tobacco mosaic virus on, inhibition of, 2020; by *Pseudomonas* and other soil bacteria, 2019.
—, —, — necrosis virus on, inhibition of, 2020.

[*Datura stramonium*, tobacco] streak virus on, transmission by seed, 909m.
— — extracts inhibiting germination of *Diplodia natalensis*, 1906.
Daucus carota, see *Carrot*.
Dazomet against *Thielaviopsis basicola* on bean, 1972; as soil treatment, 2828, 3563a.
DCMO against *Exobasidium vaccinii* on *Vaccinium*, 3396.
—, see also *Vitavax*.
DCMOD against *Drechslera poae* on *Poa pratensis*, 2098.
— ineffective against *Ustilago striiformis* on *Poa pratensis*, 2098.
—, see also *Plantvax*.
DCNA against *Monilinia* and *Rhizopus* on stone fruit, 2119.
— ineffective against *Thielaviopsis basicola* on bean, 1972.
DCT as seed treatment for wheat and soil treatment, 107.
DD against *Trichodorus*, 3557h; as soil treatment, 1178, 1538i, 2828.
—, effect on tobacco necrosis and tobacco rattle viruses in soil, 1538i.
DDAB against *Diplocarpon rosae* and *Sphaerotheca pannosa* on rose, 3558b.
Deightoniella torulosa on banana, 1933.
— — on *Musa textilis*, 1873c.
Delan 75 W.P. against *Venturia inaequalis*, 2285j.
Delphacodes pellucida, effect of wheat striate mosaic virus on longevity, 3077i.
— —, electron microscopy of virus-like particles in, 3077j.
— — transmitting oat sterile dwarf virus, 3779.
Delphinium, *Botrytis* and cucumber mosaic virus on, and dieback, Hawaii, 3334.
Demethyl-chlortetracycline against eggplant little leaf, 317.
Demeton-methyl against vectors of carrot mottle+carrot red leaf viruses, 310.
Demosan, adaptation of *Corticium solani* to, 3601.
— as seed treatment for cotton, 3298a.
— 65W against *Corticium solani* on cotton, 1659.
Dendrobium cunninghamii mycorrhiza, NZ, 2750.
Dendroctonus ponderosae, fungi in maxillary mycangium, 3038.
**Deodar* (*Cedrus deodara*), *Peniophora luna* on, India, mode of entry, 2671.
*—, *Scleroderris lagerbergii* on, USSR, 2203.
Desmodium canum, *Desmodium* mosaic virus on, electron microscopy and transmission, 2248.
*— *gangeticum*, *Colletotrichum capsici* on, India, 2578.
—, *Volutella* on, India, causing leaf spot, 3559.
— *illinoense*, *Elsinoe wisconsensis* on, host-parasite relations, 2900.
— *paniculatum* virus, related to bean pod mottle virus, properties, 3084e.
— yellow mottle virus, properties, 3084f.
Deuteromycetes, Hungary, 1980, 2340.
Deuterophoma tracheiphila on citrus, 1555.
— — on orange, 2482.

GENERAL INDEX

Dexon as seed treatment for pea, 3048; as soil treatment, 293, 2027c, 2886.
 —, effect on *Aphanomyces* on beet, 1196; *Phytophthora* and *Pythium* in soil, 2776; *Pythium* on hyacinth, 777.
Diabrotica longicornis associated with fungi on maize, 1357.
Dianthus barbatus, carnation virus diseases can infect, 1394.
 — *caryophyllus*, see Carnation.
Diaphorina citri transmitting citrus greening virus, 3277.
Diaporthaceae, Japan, life history and taxonomy, 3140.
Diaporthella alleghaniensis on birch, 2192.
 — *perniciosa*, factors affecting germination, 2288.
 — — on apple, 1425, 1710.
Diatrype stigma on *Acer saccharum*, 2661.
Diazinon against maize nematodes, 1632; rice tungro virus, 2472.
Dibotryon morbosum, CMI description, 2338.
 — — on cherry, 3241.
 — —, preserving cultures, 2359.
 — —, taxonomy, 1247h.
 1,2-dibromo-3-chloropropane against *Phytophthora* and *Pythium* in soil, 3659.
Dichanthium annulatum, effect of fungi in rhizosphere on seed germination, 48.
Dichlofuanid against *Didymella applanata* and *Elsinoe veneta* on raspberry, 2307x; *Fusicoccum amygdali* on almond, 2125; *Peronospora parasitica* on *Brassica*, 3555a; *Venturia pirina*, 2915.
 —, effect on *Botrytis cinerea*, 353.
 — residues on tomato, 909a.
 — toxicity to *Brassica*, 3555a.
 — versus benomyl, 1269.
Dichlone injury to apple, 1072.
Dichloran against *Rhizopus arrhizus* on tobacco, 1774c; as soil treatment, 1538e.
 —, effect on *Botrytis cinerea*, 353.
 α-2,4-dichlorophenyl-α-phenyl-5-pyrimidine-methanol against *Podosphaera leucotricha* and *Venturia inaequalis*, 3374.
 —, see also EL-273.
 1,2-dichloropropane as soil treatment, 2413.
Dichloropropene as soil treatment, 895, 2413.
Didecyldimethyl ammonium bromide, see DDAB.
Didymascella thujina on *Thuja plicata*, 2189c, 2308o.
Didymella applanata on raspberry, 2307x, 2725e, j.
 — *exitialis* in air over wheat field, 996.
Dieffenbachia picta, *Erwinia chrysanthemi* on, Italy, 1680.
Dieldrin against *Erwinia amylovora* on apple, 2537; as seed treatment for cotton, 3298s, c, d.
Difolatan against *Alternaria solani* on potato, 2604; *Colletotrichum agaves* on sisal, 1046; *Exobasidium vexans*, 2170e; *Fusicoccum amygdali* on almond, 2125; papaw rots, 1740a; *Physalospora rhodina* on cotton, 2079; *Phytophthora* on tomato, 3483; *P. nicotianae* var. *parasitica* on citrus, 1376; *Scirrhia pini* on pine, 2286m; *Septoria apiicola* on celery, 3540; *Venturia inaequalis*, 1537j; as bulb treatment, 1538h; as seed treatment for pea, 3048; pine, 16b; as soil treatment, 2728g.
 [Difolatan], efficiency as fungitoxicant, 652.
 — injury to citrus, 2075.
Digitalis diseases, 814.
 **Digitaria procumbens*, *Puccinia oahuensis* on, Puerto Rico, effect of dithane M45, 919b.
Digitosporium piniphilum on pine, 1808.
Dihydrostreptomycin against *Pseudomonas savastanoi* on olive, 1442.
o,o-diisopropyl-5-benzyl phosphorothiolate, see IBP.
 **Dill* (*Anethum graveolens*), *Erysiphe heraclei* on, Italy, 1569a.
Dimecron 20 against *Cercospora beticola*, 3508s.
Dimethirimol against *Erysiphe* on crops, 2308e.
 —, popular review, 3596.
Dimethylamino - benzene - diazosulphonate against *Phytophthora fragariae*, 2307w.
Dimethyl dithiocarbamate against *Alternaria* on aster, 330r.
Dinitrophenols, mode of action, 2308l, 3079d.
Dinitrorhodane-benzol against *Uncinula necator*, 810; *Uromyces dianthi* on carnation, 169.
Dinocap against *Diplocarpon rosae* on rose, 2890; *Leveillula taurica* on tomato, 1487; *Oidium begoniae* on *Begonia*, 3322; *Podosphaera leucotricha*, 513, 2310; *Sphaerotheca pannosa* on rose, 2890, 2891.
 —, effect on currant, 214.
 —, see also Karathane.
Dioscorea, see Yam (unless specified).
 — *dumetorum*, *Penicillium oxalicum* on, Nigeria, resistance, 3552.
 *— —, *Phyllostictina dioscoreae* on, Nigeria, 327e.
 — *japonica* black scurf, Japan, relation to soil toxins, 1245.
Diospyros kaki, see Persimmon.
Diplocarpon earlianum, CMI map, 84.
 — — on strawberry, 1437.
 — — *rosae* on rose, see Rose.
Diplocladium minus on mushroom, 1869.
Diplodia atrata on *Acer negundo*, 3627.
 — *cajani* on mango, 526.
 — *gossypina* associated with cotton boll rots, 488.
 — *macrospora*, effect of C & N sources on growth and taxonomic characters, 1987a, b.
 *— —, Ethiopia, 3739.
 — *maydis*, cellulolytic enzymes, 3113.
 — —, effect of C & N sources on growth and taxonomic characters, 1987a, b.
 — — on maize, see Maize.
 — —, resistance to calcium cyanamide, 1553a.
 — *natalensis*, effect of C & N sources on growth and taxonomic characters, 1987a, b.
 — —, inhibition of germination by plant leaf extracts, 1906.
 — — on avocado pear, 3406.
 — — on citrus, 1025, 2862, 3281.
 — — on grapevine, 1987c.
 — — on mango, see Mango.
 — — on orange, 526.
 — — on pine, 2286l.
 — *pinea*, CMI map, 84.

GENERAL INDEX

[*Diplodia pinea*] on pine, 2190i.
 — —, *Sphaeropsis necatrix* identical, 278.
 — — *rosarum* can infect mango, 526.
 — — on rose, 526.
 — — *zeae* on maize, 133.
Diplodina fici on fig, 2104.
Diplogaster iheriteiri transmitting plant pathogenic bacteria, 1893.
Diplomitoporus crustulinus and *D. flavescens*, descriptions, 2687b.
Diquat against *Agrobacterium tumefaciens* on grapevine, 1446.
 —, effect on *Fusarium culmorum*, *Rhizopus stolonifer* and *Trichoderma viride* on broad bean, 923.
Discella salicis proposed new comb. for *Cryptodiaporthe salicella* on *Salix*, 3133.
Discomyctes, cytology, 2355.
Discula pinicola on timber, 586.
Diseases of ornamental plants in Rumania (book), 1669.
Distreptine 20 against *Xanthomonas malvacearum*, 1043.
Disyston against vectors of beet yellows virus, 1826.
Dithane against *Alternaria tenuissima* on *Capsicum*, 631; *Colletotrichum* and *Glomerella cingulata* on papaw, 1740a; *Plasmopara viticola*, 223.
 — 945, effect on *Phoma exigua* var. *foveata* on potato, 3455.
 — C90 as soil treatment, 2728g.
 — M against *Puccinia pelargonii-zonalis* on *Pelargonium*, 2509.
 — —, effect on *Pyricularia oryzae*, 3560f.
 — M-22 against barley diseases, 2435; *Sclerospora* on maize, 3237c; *Venturia inaequalis*, 2285j.
 — —, effect on phytopathogenic bacteria, 2303.
 — — toxicity to tomato, 1784.
 — M-45 against banana diseases, 1100; barley diseases, 2435; carnation wilt diseases, 1673; *Cercospora elaeidis* on oil palm, 2154a; *Colletotrichum musae* on banana, 1101, 2563; *Diplodia natalensis* on mango, 2941; *Fusarium roseum* on banana, 2563; *Guignardia citricarpa* on citrus, 2075; *Macrophomina phaseoli* on *Hibiscus esculentus*, 2279; papaw diseases, 3410; *Phytophthora* on tomato, 3483; *Plasmopara viticola*, 223; *Puccinia oahuensis* on *Digitaria procumbens*, 919b; *Pyricularia oryzae*, 327a; tomato diseases, 1148; *Uromyces appendiculatus*, 3565e; *Venturia inaequalis*, 2285j; as seed treatment for barley, 452; as soil treatment, 269.
 — —, effect on phytopathogenic bacteria, 2303.
 — — toxicity to tomato, 1784.
 — S-31 against barley diseases, 2435.
 — Z-78 against *Alternaria burnsii* on cumin, 817; *A. cucumerina* on watermelon, 3546; *Diplodia natalensis* on mango, 2941; *Sclerotium cepivorum* on onion, 3536.
Dithianon against *Didymella applanata* and *Elsinoe veneta* on raspberry, 2307x; *Marssonina salicicola* on *Salix alba*, 3491; *Taphrina deformans* on peach, 2552; *Venturia pirina*, 2915.
Dithiocarbamate against *Mycosphaerella* on groundnut, 328c.
Di-trapex against *Verticillium dahliae* on *Euphorbia pulcherrima*, 3335.
Ditylenchus dipsaci in healthy and tobacco mosaic virus-infected tobacco, 1771.
DMOC see *Vitavax*.
DNOC against *Gnomonia erythrostoma* on apricot, 3392; *Mycosphaerella ribis* on gooseberry, 3394; *Podosphaera leucotricha*, 1079; *Sclerotinia fructicola* on peach, 2922.
Dock (*Rumex*), fungi on, USSR, 3186; on leaf fibrous residue, 3620.
 —, see also *Rumex*.
Dodder (*Cuscuta*), mycoplasma in, associated with aster yellows, 2025; clover phyllody and stolbur, 1315.
 — not transmitting strawberry latent ringspot virus, 1158.
 — transmitting citrus ringspot virus, 1323; papaw yellow crinkle virus, 1740b.
Dodine against *Taphrina deformans* on peach, 2552; *Venturia inaequalis*, 1537j, 3373.
 —, effect on apple, 1072; fungi, 2323.
 — ineffective against *Venturia inaequalis*, 1701.
 — toxicity to apple, 1072; peach, 2123; tea, 1133.
Dolichos enation mosaic virus on *Cyamopsis psoraloides*, 901, 3176.
 — *biflorus*, *Pyrenophaeta dolichi* on, spore germination, 3058.
Dothidea ribesia on *Ribes glandulosum*, 1496.
Dothidella ulei, see *Microcyclus ulei*.
Dothiorella parasitica parasitizing *Fusarium lateritium* var. *mori*, 3572.
Dowcide A-hexamine against citrus storage disorders, 330i.
DP 1991 ineffective against *Pyrenophaeta lycopersici* on tomato, 2655.
Drazoxolon against *Sphaerotheca mors-uvae* on currant, 2926.
 —, effect on *Septoria apicola* on celery, 3555e.
 — ineffective against *Exobasidium vexans*, 2170e.
Drechslera australiense. oligosaccharide synthesis, 3637.
 — — on tomato, 3008, 3487.
 * — *catenaria* on grasses, 2096.
 — *dictyoides* on *Festuca arundinacea*, 181.
 — — on *Poa pratensis*, 1055.
 — *halodes* and *D. hawaiiense* on turf, 2515.
 * — *phlei* on grasses, 2096.
 — *poae* on *Poa pratensis*, 2098.
 — *sacchari* on sugarcane, 917a.
* *Drepanopeziza punctiformis* on poplar, 2668.
Dupont fungicide 1991, see *Benomyl*.
* *Duranta repens*, *Pleurotus ostreatus* on, Egypt, 1791.
* *Durio zibethinus*, *Corticium salmonicolor* on, Sabah, 1873d.
Duter against *Alternaria alternata* and *Glomerella cingulata*, 17; barley diseases, 2435; *Cercospora beticola*, 1831; *Phytophthora palmivora* on cacao, 423; *Plenodomus destruens* on sweet potato, 3551.

GENERAL INDEX

[Duter] ineffective against *Gibberella fujikuroi*, *Pestalotia menezesiana* and *Phytophthora infestans*, 17.
 — W50, effect on *Pyricularia oryzae*, 3262a, b.
 Dynamal, as seed treatment for barley, 1372.
 Dyrene against *Alternaria* on passion fruit, 806; *Septoria apicola* on celery, 3540.

Echinochloa colonum, *Pyricularia oryzae* on, Malaya, 3561a.
Echinodontium tinctorium on *Tsuga heterophylla*, 324v.
 Echtes Ackerbohnenmosaik virus, CMI/AAB description, 3151.
Ectostroma rūicum in USSR, 3186.
 EDTA inhibiting ethylene production in leaves with tobacco mosaic virus, 3159.
 Eggplant (*Solanum melongena*), *Ascochyta phaseolorum* on, Brazil, 632.
 —, *Corticium rolfsii* on, India, hosts and susceptibility, 3074.
 *— crinkle mosaic virus on eggplant, India, 1243.
 —, cucumber mosaic virus on, India, 1243.
 —, *Curvularia pallens* on, effect of vitamins on growth and sporulation, 3636.
 —, *Fusarium oxysporum* on, Armenian SSR, 2032.
 —, — f.sp. *apii* on, 422.
 — little leaf disease, mycoplasma causing, 317, 2026.
 — mosaic, India, viruses associated with, 1243.
 — — virus, effect of organic Hg compounds, 3693.
 *— — on *Boerhaavia diffusa*, 3073.
 — — — on eggplant, Trinidad, hosts and transmission, 978.
 *— — — on *Trianthema monogyna*, 3073.
 — mottled dwarf virus on eggplant, 910h; Italy, particles and transmission by grafting, 316.
 —, mycoflora on roots, Lebanon, 716.
 —, *Phomopsis vexans* on, India, 2722; control, 2722; cultural characters and pathogenicity, 1244.
 —, *Phytophthora palmivora* on, ultrastructure of haustoria, 937.
 —, *Pseudomonas solanacearum* can infect, 3579.
 —, — on, C. and S. America, 2735; France, 1; India, 2723; physiologic races and str. and transmission by vectors, 2735; var. react., 2723.
 —, *Pythium butleri* on, 1862.
 *— ring mosaic and severe mosaic viruses on eggplant, India, 1243.
 —, stolbur on, USSR, transmission by vectors, 3172.
 —, tobacco mosaic virus eggplant mild mosaic str. on, India, 1243.
 —, *Verticillium albo-atrum* on, Armenian SSR, 2032.
 *—, — *dahliae* on, *Turkey, 2721; var. react., 2278.
 EL-273 against *Venturia inaequalis*, 3565c.
Elaeis guineensis, see Oil Palm.
Elaphostrongylus panticola, *Arthrobotrys arthrobotryoides*, *A. conoides*, and *Dactylariopsis brochopaga* on, 348.

Elder, see *Sambucus*.
 Electron microscopy of *Agrobacterium tumefaciens*, 301; alfalfa mosaic virus, 3362; *Alternaria brassicicola*, 2349, 2788, 3138; apple chat fruit virus, 2725g; *Aspergillus*, 332e; *A. amstelodami*, 3678; bean common mosaic virus, 2698; bean southern mosaic virus, 2371; bean yellow mosaic virus, 2698; beet mosaic virus, 406; *Botrytis fabae*, 2308n; *Byssochlamys fulva*, 1993; chrysanthemum virus B, 774; *Cochliobolus miyabeanus*, 1931, 3794; *C. sativus*, 382; *Dahlia* mosaic virus, 3177; *Delphacodes pellucida*, 3077j; *Erysiphe graminis* on barley, 734; *E. polygoni* on clover, 1060; *Fusarium* spp., 2348; *F. oxysporum* f.sp. *cucumerinum*, 2715; *F. roseum*, 1929; grapevine fanleaf virus, 808; groundnut latent virus, 2286a; *Hippocratea* mosaic virus, 3341; legume little leaf-diseased cowpea, 2798; lily symptomless virus, 1053; maize rough dwarf virus, 457; maize stunt, 739; micro-organisms in soil, 3684; *Myzus persicae*, 3155; *Narcissus* mosaic virus, 2889; NEPO virus-infected plants, 3153; papaw viruses, 2286i; *Pernospora parasitica* on cabbage, 2216; *Phytophthora capsici*, 2352; *P. palmivora*, 691; *Polymyxa betae* on beet, 1195; potato leaf roll virus, 3443; potato virus X, 407, 3167; potato viruses, 1538v, 2727s; *Pyricularia oryzae*, 3265; *Rhizopus*, 332e; rice transitory yellowing virus, 1017; sandalwood spike virus, 866; *Sclerospora macrospora*, 1647; soil, 3655; soybean mosaic virus, 3054; *Sphaerotheca macularis*, 3677; squash mosaic virus, 1237; stolbur, 852, 3480; *Thieliaviopsis basicola*, 3128; *Tilletia* on cereals and grasses, 968; tobacco mosaic virus, 404, 836, 837, 2731; tobacco mosaic virus bean str., 1204; tobacco necrosis and satellite viruses, 3161; tobacco rattle virus in *Trichodorus pachydermus*, 3170; tobacco ringspot virus on bean roots, 3519; tomato spotted wilt virus, 3171; *Venturia inaequalis*, 3372; *Xanthomonas phaseoli* bacteriophage, 2701.

Eleusine coracana, microflora in rhizosphere, enzyme activity, 3664.
 — — mosaic disease, India, sugarcane mosaic virus str. causing, transmission by sap, 3257.
 — —, *Pythium aphanidermatum* on, India, 86.
 — — virus, India, transmission by vectors, 2470.

Elm (*Ulmus*), *Armillaria mellea* on, control, 1157.
 —, *Ceratocystis ulmi* on, 331m; **Canada* (NB), 257b; England, 2664; Greece, introduced from Bulgaria or Yugoslavia, 575; UK, 2189f; USA, 2196; anatomy, 574; control, 2665; coremia production, 262; effect of tissue extracts, 2198; effect on movement of ^{14}C -photosynthate, 863; factors affecting, 263, 2664; growth and morphogenesis, 2663; identifying, 324u; rate of movement, 2197; resistance, 1792, 3013, 3014; symptom progression, 2196; thiabendazole ineffective against, 2666; transmission by vectors, 2664; viability, 2198.

GENERAL INDEX

- *[Elm], *Clitocybe tabescens* on, USA (Miss.), causing dieback, 864.
- , *Erwinia nimipressuralis* on, plastic tubing for draining, 2199.
- witches' broom virus, *Czechoslovakia and Italy, 2008d.
- Elosal against *Oidium euonymi-japonica* on *Euonymus japonicus*, 1397.
- Elsinoe ampelina* on grapevine, 326, 2948.
- *fawcettii* on citrus, 2804.
- *kamatii* on *Eugenia jambolana*, 1102, 2954.
- *veneta* on raspberry, 2307x.
- *wisconsiensis* on *Desmodium illinoense*, 2900.
- Elvaron against *Botrytis cinerea* on tomato, 909a.
- Elymania virescens* transmitting aster yellows, 2387.
- Elymus cinereus*, *Puccinia striiformis* on, USA, 1596.
- Elytroderma deformans* on pine, 257e.
- **Emblica officinalis*, *Penicillium oxalicum* on, India, in transit, 85a.
- Empoasca papaya* transmitting papaw bumpy top virus, 1740b.
- Encoeliopsis laricina* on larch, 868.
- Endive (*Cichorium endivia*), *Alternaria porri* f.sp. *cichorii* on, Italy, 2260.
- *—, *Corticium solani* on, Italy, 1569a.
- Endocronartium harknessii* and *E. pini* on pine, 578.
- Endogone* forming mycorrhiza, culture, 3077a.
- *lactifluia* on pine, forming mycorrhiza, 22, 3614a.
- on *Pseudotsuga menziesii*, forming mycorrhiza, 22, 3614a.
- *macrocarpa* var. *geospora* on maize and tomato, forming mycorrhiza, 936a, b.
- Endothia eugeniae* proposed for *Cryptosporella eugeniae*, 64.
- *— *havanensis* on *Eucalyptus grandis*, 1793.
- *parasitica* on chestnut, 861, 862.
- Endria inimica*, concentration of wheat striate mosaic virus in, 430.
- Enovit as soil treatment, 2183.
- Enterobacter proteamaculans*, classification, 1888.
- Entomophthora scatophagae* on flies, USSR, 347.
- Entyloma calendulae* f.sp. *dahliae* on *Dahlia*, 1050a, b.
- *— *compositarum* on *Gaillardia aristata*, 322.
- *kundmanniae* on *Kundmannia sicula*, 2342.
- *lineatum* on *Zizania*, 2066.
- *oryzae*, CMI map, 84.
- Ephelis ?oryzae* on *Panicum miliare*, 749.
- Epicoccum nigrum* on barley, stored, 1346.
- on grain, 97.
- Epilachna vigintioctomaculata*, *Beauveria bassiana* and *B. tenella* on, 1546.
- Epitettix hiroglyphicus* transmitting sugarcane white leaf disease, 1130, 1131.
- Epithrix atropae* transmitting belladonna mottle virus, 2282f.
- EPN E.C. against cotton boll-rot, 2079.
- EPTC, effect on *Corticium solani* in soil, 2773.
- Eremothecium ashbyi*, effect of polyene antibiotics, 656.
- Erianthus arundinaceus*, sugarcane red stripe disease can infect, 2625.
- Erica*, *Phytophthora cinnamomi* on, popular account, 2093.
- Erigeron canadensis*, aster yellows on, mycoplasma associated with, transmission by dodder, to *Vinca rosea*, 1314.
- Eriochloa annulata*, *Pyricularia oryzae* on, Malaya, 3561a.
- Eruca sativa*, *Alternaria brassicae* on, India, morphology, 3503.
- Erwinia amylovora*, hosts, 1909, *3081.
- —, legislation against, in Denmark, 3609; Germany & Norway, 2317; Sweden, 1909.
- — on apple, see Apple.
- — on *Cydonia*, 1721.
- — on fruit trees, 192, 1085, 2528, 2903.
- — on pear, see Pear.
- — on *Pyrus*, 1721.
- — on tobacco, 2179, 3582.
- —, transmission by nematodes, 1893.
- — *aroideae* on cabbage, 2802.
- — on *Zantedeschia aethiopica*, 2086.
- — *atroseptica*, differentiation from other *E. spp.*, 3578.
- — in soil, 3557c.
- — on potato, see Potato.
- — *carotovora*, effect of C sources, 3584.
- — in soil, 3557c.
- — on banana, 1739, 2564.
- — on cabbage, 2802.
- — on hyacinth, 1392.
- — on lupin, 187, *1695.
- — on maize, 3787.
- — on potato, 2284.
- — on rice, 2062.
- — on sunflower, 2964.
- — on tomato, 330j.
- —, production of proteolytic enzymes, 1939.
- —, transmission by nematodes, 1893.
- — f.sp. *zeae* on maize, 3243.
- — *chrysanthemi* on carnation, 1676.
- — on *Chrysanthemum*, 1909.
- — on *Dahlia*, 1392.
- — on *Dieffenbachia picta*, 1680.
- — *dissolvens*, taxonomy, 1888.
- — *herbicola*, CMI description, 3090.
- — on cotton, 3312.
- — *nigrifluens* on walnut, 3022.
- — *nimipressuralis* on elm, 2199.
- —, taxonomy, 1888.
- — *parthenii* var. *dianthicola* on carnation, 1538f.
- — *proteamaculans*, classification, 1888.
- — *ruberificiens* in soil, 2737.
- — on walnut, 3022.
- — *salicis* on *Salix alba*, 3492.
- — *tracheiphila*, CMI description, 3090; map, 84.
- — on hemp, 166.
- — *uredovora*, CMI description, 3090.
- Erysiphales, Poland, 2343; USA, 3088; USSR, 3366; control, 2308q.
- Erysiphe betae* on beet, see Beet.
- — *cichoracearum*, hosts, 313.
- — in USSR, 3186.

GENERAL INDEX

[Erysiphe cichoracearum] on *Begonia*, 3322.
 — on *Centaurea moschata*, 1671.
 — on cucumber, 1239, 2264.
 *— on *Helipterum album* and *H. roseum*, 1671.
 — on hops, 918.
 — on melon, 1524, 1531, 2718.
 — on *Mentha cardiaca*, 2579.
 — on papaw, 1417.
 — on peppermint, 2579.
 — on squash, 1239.
 — on tobacco, see *Tobacco*.
 — on vegetable marrow, 2271.
 — on watermelon, 3070.
 — *communis* f.sp. *trifolii* on red clover, 3359.
 — *graminis*, β -amylase activator, 1206.
 — eradication by tridemorph, 2308g.
 — in the air, 449, 996.
 —, Israel, f.sp. and host ranges, 3214.
 — on barley, see *Barley*.
 — on cereals, see *Cereals*.
 — on cocksfoot, 2895.
 — on oats, 738, 2443, 3078a.
 — on *Poa pratensis*, 3358.
 — on rye, 3757.
 — on wheat, see *Wheat*.
 —, physiologic races, 2e.
 — ff.sp. on grasses, 1057.
 *— *heraclei* on dill, 1569a.
 — *polygoni* on beet, 1509.
 — on clover, 1060, 3360.
 — on cowpea, 1852, 2246, 3057.
 — on cucumber, 1269, 3602.
 — on pea, 1200, 1513, 1514.
 — on *Phaseolus lunatus*, 1269.
 — on swede, 3078a.
 —, self-infection, 2289.
 — *polyphaga* on bean, 1845.
 — on *Begonia*, 3322.
 — on cucumber, 1845.
 *— on *Saintpaulia ionantha*, 3081.
 Erythromycin, effect on aster yellows on *Vinca rosea* and stolbur on *Capsicum*, tobacco and tomato, 354.
 *Escarole (*Cichorium endivia*), *Corticium solani* and *Pseudomonas cichorii* on, Italy, 1569a.
 Escherichia coli, antibiotic activity of *basidiomycetes* against, 3607b.
 —, *Glomerella cingulata* not antagonistic to, 658.
 — inhibiting tobacco mosaic virus, 400.
 — on cotton, 161.
 Ethanol as soil treatment, 2413.
 — produced by *Armillaria mellea* and *Aureobasidium pullulans*, effect on rhizomorph development, 1677.
 Ethionine, effect on *Fusarium oxysporum* f.sp. *lycopersici* on tomato, 941.
 Ethion-oil against *Gloeosporium foliicola* on citrus, 2073.
 Ethirimol against cereal diseases, 3077i; *Erysiphe graminis* on cereals, 2307c, 2308e.
 —, new systemic fungicide, 3077i.
 Ethyl acetate, produced by *Ceratocystis adiposum* and *C. paradoxa*, 550.
 — alcohol, see *Ethanol*.
 Ethylan C.P., use on coffee, 3079b.
 Ethylene, effect on *Fusarium oxysporum* on tomato, 324b.
 — inducing formation of pisatin in pea, 1841.
 — produced by *Ceratocystis fimbriata* on carrot and sweet potato, 1528; cowpea mosaic virus-infected cowpea, 2709; tobacco mosaic virus infected leaves, 2373, 3159.
 —bis-dithiocarbamate against *Alternaria* on aster, 330r.
 Ethyl mercuric chloride as seed treatment for barley, 1342.
 — mercury toluene sulphonanilide as seed treatment for beet, 1833.
Eucalyptus ficifolia, *Sporotrichum destructor* on, W. Australia, study, 3015.
 — *globulus*, *Armillaria mellea* on, Tasmania, 1794.
 *— *grandis*, *Endothia havanensis* on, Surinam, 1793.
 — *obliqua* and *E. regnans*, *Armillaria mellea* on, Tasmania, 1794.
Eudarluca caricis, factors affecting growth, 3653.
 — parasitizing *Puccinia sorghi*, 460.
 — —, technique for producing conidia for inoculation, 973.
Eugenia aromatic, see *Clove*.
 — *jambolana*, *Diplodia* on, 526.
 — —, *Elsinoe kamatii* on, India, 1102; development of ascoma, 2954.
Euonymus europaeus, strawberry latent ringspot virus on, transmission, 1158.
 — *japonicus*, *Oidium euonymi-japonica* on, Iran, 1397.
 Eupenarg against *Botrytis* on horticultural crops, 1902; *Botrytis cinerea*, 1901; on grapevine, 2570; on hop, 1747; on strawberry, 802; *Cladosporium fulvum*, 2653; fungi on grapevine, 1745; *Gloeosporium* on apple, 1706; *Plasmopara viticola*, 3418; *Podosphaera leucotricha*, 1705, 1706; pome fruit diseases, 1707; *Pseudoperonospora humuli* on hop, 1747; *Pseudopeziza tracheiphila* on grapevine, 3418; *Puccinia pelargonii-zonalis* on *Pelargonium*, 2509; *Sclerotinia fuckeliana* on grapevine, 811; *Sphaerotheca humuli* on hop, 1747; *Uncinula necator*, 1745; *Uromyces dianthi* on carnation, 1675; *Venturia inaequalis*, 1705, 1706.
 — WP against *Botrytis cinerea* on strawberry, 1734.
Eupatorium capillifolium, tobacco ringspot virus on, transmission by vectors, 3700.
Euphorbia lathyris, *Thielaviopsis basicola* on, aggressiveness and morphology of str., 1140.
 — *pulcherrima*, ammonia injury to, 913.
 — —, *Chalaropsis thielavioides* on, 3337.
 — —, effect of fungicides, 1400.
 — — root diseases, control, 2886.
 — —, *Thielaviopsis basicola* on, control, 3336.
 *— —, *Verticillium dahliae* on, Sicily, 3335.
Europodium clavigerum in mycangium of *Dendroctonus ponderosae*, 3038.
Eurotium amstelodami on barley, stored, 1347.

Euscelidius variegatus, transmitting peach western X disease virus, 2797.

Euscelis plebeja, clover phyllody mycoplasma in, 1315, 3178.

—, stolbur C and SM mycoplasma in, 1315.

—, transmitting ornamentals phyllody, 2496.

Eutettix tenella, see *Circulifer tenellus*.

Eutypa armeniacae on apricot, 799.

Eutypella parasitica on *Acer saccharum*, 2661.

Exobasidium azaleae on azalea, 2727h, j.

— *japonicum* on *Rhododendron kaempferi*, 937.

— *vaccinii* on *Vaccinium*, 3396.

— *vexans* on tea, 244, 2170a, e.

F196 ineffective against *Pyrenopeziza lycopersici* on tomato, 2655.

Fabraea maculata on pear, 1719.

Fagopyrum esculentum, see Buckwheat.

Fagus, see Beech.

Falisan against *Gibberella pulicaris* on hop, 2577; as seed treatment for cucumber, 3544.

—, effect on *Gladiolus* corms, 3340.

Fennel, see *Foeniculum vulgare*.

Fenugreek, see *Trigonella foenum-graecum*.

Ferbam against *Gloeosporium foliicola* on citrus, 2073; *Helminthosporium papulorum* f.sp. *pyri* on pear, 3380; pear diseases, 1719; *Sphaelotheca cruenta* on sorghum, 1361; *Sphaelotheca pannosa* var. *persicae* on peach, 1090; *Trichometasphaeria turcica* on maize, 2461; *Uromyces dianthi* on carnation, 169.

—, factors affecting persistence in soil, 2313.

— injury to *Euphorbia pulcherrima*, 1400.

Fernasan against *Pythium debaryanum* on tomato and as seed treatment for tomato, 566.

— D, as seed treatment for barley, 1342.

Fertilizers, effect on *Alternaria* on passion fruit, 806; *A. longipes* on tobacco, 636a; beet black leg, 2224; beet yellows virus, 3556e; *Cephalosporium gramineum* on wheat, 1611; *Cercospora herpotrichoides* on wheat, 2427; *Erwinia amylovora* on pear, 207; *Fusarium* on flax, 1666; on rye and wheat, 3754; *F. oxy-sporum* on hemp, 1388; *F. o.* f.sp. *conglutinans* on cabbage, 884; *F. o.* f.sp. *lycopersici*, 330f, 3485; *F. o.* var. *medicaginis* on lucerne, 1413; *F. solani* f.sp. *phaseoli* on bean, 1213; *Leptosphaeria nodorum* on wheat, 3209; lettuce hollow stalk, 2259; microflora in rhizosphere of coffee, 1381; mycorrhiza of wheat, 2748; *Ophiobolus graminis* var. *avenae* on *Lolium*, 635d; *Phytophthora cinnamomi* on avocado pear, 218a, b; *Puccinia graminis* on wheat, 436; root rot of barley and wheat, 3215; soil fungi, 1270, 3191; soil microflora under maize and wheat, 990; soybean nodulation, 2707; *Typhula* on rye and wheat, 3754; *Ustilago maydis*, 131, 2457; *Verticillium* on beet, 1538j; wheat spindle streak mosaic virus, 2413.

Festuca, *Calonectria nivalis* and *Sclerotinia borealis* on, Canada, 1690.

—, *Sphaerella cerea* on, 635e.

—, *Typhula incarnata* and *T. ishikariensis* on, Canada, resistance, 1690.

— *arundinacea*, *Drechslera dictyoides* and *Helminthosporium vagans* on, susceptibility, 181.

— and *F. heterophylla*, *Spermospora subulata* on, Germany (N.), 1056.

— *pratensis*, cocksfoot streak virus on, Germany (E.), 2514.

—, oats sterile dwarf virus can infect, 3229.

— *rubra*, *Spermospora subulata* on, Germany (N.), 1056.

Ficus carica, see Fig.

— *elastica*, *Cercospora* on, isolation and culture, 2503.

— leaf spot, factors affecting, 2504.

Fig (*Ficus carica*), *Diplodina fici* on, USSR, 2104.

FL 23 and FL 50, effect on *Gladiolus* corms, 3340.

Flacourtiaceae producing antifungal substance, 1907.

Flax (*Linum usitatissimum*), *Botrytis cinerea* f.sp. *lini* on, citric acid production, 664.

—, *Corticium solani* on, genetics of resistance, 2878.

— diseases, Argentina, assessment, 2803.

—, *Fusarium* on, antagonism of *Trichoderma viride*, 681; effect of zinc, 1387; factors affecting, 1666.

—, — *anguoides*, *F. equiseti* and *F. martii* f.sp. *aduncisporum* on, 1044.

—, — *oxysporum* f.sp. *lini* on, Ethiopia, 918; effect of crops on infection, 491.

—, — ff.sp. on, fusaric acid in selective pathogenicity, 940.

*—, *Gibberella pulicaris* on, 1044.

—, *Melampsora lini* on, Madeira, 3184; culturing, 3315; growth and sporulation, 3317; histology, 1386; resistance, 490, 1386.

—, *Mycosphaerella linorum*, spore dispersal, 3316.

—, *Polyspora lini* on, biochemical mutants, 162.

—, *Puccinia graminis* and *P. recondita* on, inducing resistance to *Melampsora lini*, 490.

— sickness, effect on, *Fusarium* not associated with, 3317.

Flies, *Entomophthora scatophagae* on, USSR, 347.

Flit 406 as seed treatment for barley, 1344; as soil treatment, 1317.

Flower bulbs, fungi on, control, 2727v.

Flowers, *Ascochyta* on, USSR, list, 2084.

—, lime induced chlorosis in, control, 3667.

Fluoride injury to crops and ornamentals, 2402.

Foeniculum vulgare seed treatment, effect on storage, 3426.

Folpet against *Botrytis cinerea* on grapevine, 1745; *Plasmopara viticola* and *Pseudopeziza tracheiphila* on grapevine, 3418.

GENERAL INDEX

Fomes annosus, effect of antibiotics, 3106; of borax, 1174.
 — —, lipid content, 3651.
 — —, lysosome contents, 2291.
 — —, modes of infection and spread, 1260j, 3027.
 — — on *Abies alba*, 3498.
 — — on *A. grandis*, 2189b.
 — — on *A. pectinata*, 3026.
 — — on *Coniferae*, 645a, 3028, 3029.
 — — on forest trees, 2189a, 2678.
 — — on pine, see Pine.
 — — on *Pseudotsuga menziesii*, 1814, 2189b, 3498.
 — — on spruce, see Spruce.
 — — on timber, 589.
 — — on *Tsuga heterophylla*, 1814, 2189b, 3030.
 — — *connatus* and *F. fomentarius* on *Acer saccharum*, 2660.
 — — *fomentarius* on birch and pine, 3039.
 — — *igniarius*, interactions with other fungi, 2290.
 — — on *Acer saccharum*, 2660.
 — — on aspen, 1491.
 — — on grapevine, 2947.
 — — on trees and shrubs, 1156.
 — — *lignosus*, development phases, 675, 676.
 * — — on coffee, 329e.
 — — on *Hevea* rubber, see Rubber.
 * — — on papaw, 329f.
 — — *lividus* on timber, 587.
 — — *noxius* on *Hevea* rubber, 831, 1467a.
 — — on tea, 2170b.
 — — *pini* on forest trees, 874.
 — — on pine, 1809.
 — — *pinicola* on *Pseudotsuga menziesii*, 113.
 — — *tremulae* on aspen, 1491.
 Forest pathology, Canada, herbarium for, 856.
 — — Products Research Laboratory, England, work on timber preservation, 2682d.
 — — trees, *Armillaria mellea* on, Canada, 257a.
 — — biological background to quarantine, 2190e.
 — — diseases, Jamaica, 2657; Norway, 2191; Portugal, 2190h; Taiwan, 1155; Trinidad & Tobago, 2657; USA, 2190a; aerobiological studies, 571b; extension, international co-operation and training in research, 2190b; importance and prediction, 2190c; review of world spread, 2190d.
 — — *Fomes annosus* on, USSR, manual on, 2678; control, 2189a.
 — — *pini* on, Pakistan, appraisal of decay, 874.
 — — mycorrhiza of exotic, review, 1914.
 — — *Polyporus schweinitzii* on, 571a.
 — — virus diseases, UK, effect on sp. gr. of wood, 2189i.
 Formaldehyde against *Fusarium* and *Pythium* on cucumber, 627; as seed treatment for barley, 3220.
 — — as soil treatment, 16b, 750, 998, 1426, 2307j, 2413, 2828, 3191, 3335.
 — — effect on mycorrhiza of wheat, 2748; *Sphacelotheca* *destruens* on *Panicum miliaceum*, 750.
 — — use on tools, 805.
Forsythia yellow-net disease caused by tobacco ring spot virus, 3083e.
Fragaria, see Strawberry.
Fraxinus, see Ash.
Freesia streak virus, properties, 909n.
 Fructose causing protein dispersion in beet yellows virus-infected leaves, 2282e.
 Fruit diseases, USSR, 192; data on fungicides and symptoms, 1696.
 — — *Erwinia* on, USSR (Krasnodar), non-occurrence of *E. amylovora*, 192.
 — — fungi on stored, Armenian SSR, 420.
 — — lime-induced chlorosis in, control, 3667.
 — — post-harvest diseases, 3559; control, 2739; effect on, 3748.
 — — *Pseudomonas syringae* on, USSR, 192.
 — — virus diseases, Poland, 1537a; Advis. Leafl. on, 785.
 — — *Xanthomonas pruni* on, USSR, 192.
 Fruit, soft, diseases, control, 2307t; economic importance, 2307p.
 — — tropical, storage disorders, advisory booklet, French, 220.
 Fruit tree diseases, Japan, 2804; USA, 2526; control, 1071, 1268, 2526; factors affecting, 2804.
 — — trees, applying wound treatment preparations, 2593m.
 — — *Erwinia amylovora* on, Denmark, 1085, *1427; control, 1427; *Crataegus* as source of infection, 2528; legislation against in Denmark, 1085; in Germany, 2528.
 — — plum pox virus on, Yugoslavia, symptoms, 2548.
 — — prune dwarf + *Prunus* necrotic ring-spot viruses on, 2522m.
 — — *Pseudomonas* on, serology, 3093.
 — — *Sclerotinia fructicola* on, NSW, cultural characteristics, 191.
 — — *Stereum purpureum* on, susceptibility, 2527.
 — — virus diseases, Czechoslovakia, 2523o; Denmark, 1416; Germany (E.), 2523n; India, 2522u; Rumania, 2524; development and problems in research, 2522a; interference, 2522y; mountain isolation for virus-free, 2523o; production of virus-free in nurseries, 2523n; transmission by vectors, 2523h; woody indicators, 2523p.
 **Fuchsia*, *Pucciniastrum epilobii* f.sp. *palustris* on, Denmark, 322.
 Fuclasin against *Septoria lycopersici*, 3002.
 Fungal spores, disintegration, 1952; dispersal by birds, 922; water, 2288; effects of fungicides, 3079a; electrokinetic properties, 363; ontogeny, 3144; surface components, 3079a.
 Fungi and man, review, 3566.
 — — class work with, book on, 2nd ed. revised, 340.
 — — entomogenous, USSR, 346, 347, 348; biological control by, 3589, 3590; isolation and mass culturing, 2304.
 — — guide to Ukrainian, 60, 1544.
 — — harmful and useful, Russian book on, 2734.
 — — in Canary Islands and Madeira, 3184; India, *815, 3559, 3671; Pakistan (E.), 2391; Southern S. America and Antarctica, 2778; USSR (Turkmenia), 2341.

GENERAL INDEX

{Fungi], Index of, Supplement to Petrak's lists, 1920-1939, 383.

— of Czechoslovakia in their natural habitats, book on, 1884.

—, Vol. IV. Phycomyctes. Peronosporales. Polish book on, 2782.

—, nematophagous, isolating and maintaining, 2002.

—, thermophilic, cellulolytic and pectolytic activity, 3654.

Fungicide 3040 against *Exobasidium vexans*, 2170e.

—nematicide tests, 2309.

Fungicides, agricultural and horticultural, past, present and future, 1267.

— for fruit and berry crops, Russian book on, 1696.

—, guide to new compounds, 645.

—, list of tested, in Rumania, 1548.

—, official FDA tolerances, annual revision, 2738.

—, Vol. II, Chemistry and physiology, 2306.

— & nematicides, their uses in USA, annotated index, 1896.

Fungus flora, British, Agarics and Boleti: introduction, book on, 2339.

Fusariol against *Ustilago hordei* on oats, 737.

Fusarium acuminatum, C nutrition and growth, 1921.

*— *anguiodes* on flax, 1044.

— *arthrosporioides* on carnation, 1673.

— *avenaceum* inhibiting *Venturia inaequalis*, 2725b.

— — on barley, 1340, 1346.

— — on carnation, 1673.

— — on carrot, 1527.

— — on wheat, 999.

— *bulbigenum* in soil, 2790.

— — on lupin, 1537h.

— *concolor* on *Musa textilis*, 3562h.

— *culmorum*, effect of C nutrition on growth, 1921; of UV light on sporulation, 2282j.

— —, interaction of 2,4,5-trichloro-phenylsulphonylmethyl thiocyanate with, 18.

— — on broad bean, 923.

— — on carnation, 1673.

— — on cereals, 426.

— — on cotton, 158.

— — on maize, 1631b.

— — on wheat, 999, 3771.

*— *equiseti* on flax, 1044.

— *lateritium* f.sp. *cajani*, extracellular hydrolytic enzymes, 942.

— — — *ciceri* on *Cicer arietinum*, 1520.

— — — var. *mori*, *Dothiorella parasitica* hyperparasitic on, 3572.

*— *martii* f.sp. *aduncisporum* on flax, 1044.

— — var. *pisi* action of toxins, 2324.

— *orthoceras* on cotton, 161.

— *oxysporum*, antagonism of *Labyrinthula*, 1251.

— — chlamydospore production, 1916.

— — effect of maleic hydrazide on growth, 365; of ozone on germination, 671; of soil treatment, 2727l.

— —, electrophoretic patterns of soluble proteins, 1995.

— —, hosts, 66, 2032.

— —, in Armenian SSR, 2032.

— — in rhizosphere of groundnut, 609.

[*Fusarium oxysporum*] in soil, see Soil.

— — inhibiting *Cunninghamella elegans*, 1924.

— —, morphological characters, 66.

— — on banana, 522.

— — on cactus, 1048.

— — on cantaloupe, 623.

— — on carnation, 1673.

— — on cotton, 1664.

— — on flower bulbs, 2727v.

— — on *Gerbera*, 775.

— — on hemp, 1388.

— — on lentil, 3516.

— — on lily, 1538h, 2091.

— — on lupin, 1537h.

— — on maize, 1357, 1632, 3782a, b, c.

— — on pea, 3516.

— — on *Pennisetum typhoides*, 136.

— — on pine, 2674.

— — on *Pseudotsuga menziesii*, 1178.

— — on tomato, 324b.

— — on tulip, 2893.

— —, perfect state, 324h.

— —, producing fusaric acid, 1920.

— — f.sp. *albedinis* on date palm, 3431.

— — — *apii*, hosts, 422.

— — — *asparagi* in soil and on *Asparagus*, 1538b.

— — — — *batatas* on sweet potato, 320.

— — — — *callistephi* in soil, 960.

*— — — — on *Tagetes erecta*, 1684.

— — — —, synthesis of heterokaryons and parasexual reaction, 1996.

— — — — *carthami* on safflower, 2151.

— — — — *cassiae* on *Cassia tora* and celery, 422.

— — — — *chrysanthemi* on *Chrysanthemum*, 2885.

— — — — *conglutinans* on cabbage, 324y, 883, 884.

— — — — *corianderii* in soil, 1973, 3662.

— — — — on coriander, 2953.

— — — — *cubense* on *Asparagus*, 422.

— — — — on banana, see Banana.

— — — — *cucumerinum*, electron microscopy, 2715.

— — — — in soil, 1240.

— — — — *cumini* in soil, 1973, 3662.

— — — — on cumin, 818, 2952.

— — — — *dianthi* on carnation, 321c.

— — — — *elaeidis*, esterase and protein patterns, 966.

— — — — in soil, 1298.

— — — — on oil palm, 3432.

— — — — *gladioli* on *Gladiolus*, see *Gladiolus*.

— — — — on iris, 2505.

— — — — on tulip, 178.

— — — — *lilii* on lily, 2888.

— — — — *lini* on flax, 491, 918.

— — — — on linseed, 163.

— — — — *lycopersici* metabolizing quinazolone, 1277, 2742.

— — — — on watermelon, 3749.

— — — —, resistance to ascochitinine, 1272.

— — — — +*F. o.* f.sp. *dianthi* on tomato, 3003.

— — — — *medicaginis* on *Asparagus*, 422.

— — — — on lucerne, 509.

GENERAL INDEX

[Fusarium *oxysporum* f.sp.] *melonis*,
 esterase and protein patterns, 966.
 — — — on melon, 1, 314, 3545.
 — — — *narcissi* on *Narcissus*, 3343.
 — — — *niveum* on lucerne, 1070.
 — — — *passiflora* on passion fruit, 2943.
 — — — *pisi* on pea, see Pea.
 — — — on swede, 3078a.
 — — — *vanillae* on vanilla, 1107, 1748.
 — — — *vasinfectum*, antagonism of *Labyrinthula*, 1251.
 — — — — effect of atrazine on growth, 1918.
 — — — — in soil, 959, 1969, 3130.
 — — — — mineral uptake, 1917, 2765.
 — — — — on cotton, 422, 2080.
 — — — — on *Tithonia rotundifolia*, 422.
 — — — — producing enzymes and toxins, 2486.
 — — — — — serology, 2486, 3082a.
 — — — ff.sp., OMRI description, 1975.
 — — — — on cabbage, carnation, flax, tomato and watermelon, 940.
 — — — — producing fusaric acid, 1919.
 — — — — *poae*, lipolytic activity and toxicity, 3642.
 — — — — on barley, 1340.
 — — — — on *Ocneria dispar*, 346.
 — — — — *redolens* on lucerne, 1411.
 — — — — on tomato, 1870d, *3730a.
 — — — — synthesis of heterokaryons and para-sexual reaction, 1996.
 — — — — *roseum*, biodegradation of γ BHC, 2766.
 — — — — dispersal, 2288.
 — — — — effect of calcium on polygalacturonases, 324c; of CO_2 and O_2 , 1948.
 — — — — electron microscopy, 1929.
 — — — — in soil, 2772.
 — — — — on banana, 2563.
 — — — — on carnation, 1049, 1396.
 — — — — on maize, 1015, 1362, 1632.
 — — — — on potato, 1754c.
 — — — — on *Rhododendron*, 3347.
 — — — — on sorghum, 1362, 1928.
 — — — — on turf, 3355.
 — — — — on wheat, 1362, 2828.
 — — — — f.sp. *cerealis* on sorghum, 328b.
 — — — — — 'Culmorum' in soil, 3666.
 — — — — — 'Graminearum' on maize, 1357.
 — — — — — *dianthi* on carnation, 3327.
 — — — — *scirpi* on *Aspidosperma quebrachoblanco*, 860.
 — — — — *semitectum*, synthesis of oligosaccharides, 943.
 — — — — on *Ocneria dispar*, 346.
 — — — — *solani*, effect of plant excretions on development, 1964.
 — — — — factors affecting growth, 3117.
 — — — — in soil, 959, 1966.
 — — — — on *Acer saccharum*, 258.
 — (?) — on *Antirrhinum*, 2880.
 — — — — on black pepper, 227.
 — — — — on *Colocasia esculentum* var. *anti-quorum*, 2280.
 — — — — on cotton, 158.
 — — — — on groundnut, 3533, 3534.
 — — — — on *Hibiscus sabdariffa* var. *altissima*, 2082.
 — — — — on potato, 1462, 2743.
 — — — — on tomato, 1149.
 — — — — on *Vanilla*, 1748.
 — — — — perfect state, 324h.

[Fusarium *solani*], photo-induced perithecial formation, 40.
 — — — f.sp. *aurantifoliae*, N requirement, 3641.
 — — — — *phaseoli*, effect of dodine, 2323; of glucose+quintozene on germination, 380.
 — — — — f.sp. *phaseoli* in soil, 959, 1970, 2770.
 — — — — — on bean, 1213, 3521.
 — — — — — producing proteolytic enzymes, 1939.
 — — — — — *piperi* on black pepper and *Piper colubrinum*, 2955.
 — — — — — *pisi* in soil, 2696.
 — — — — — on pea, 602, 895, 1844.
 — — — — — + *Aphanomyces euteiches* in soil, 602.
 — — — — var. *eumartii* on potato, 2976, 3456.
 — (?) — — *martii* on *Antirrhinum*, 2880.
 — — — — *sporotrichiella*, lipolytic activity and toxicity of str., 3642.
 — — — — *sporotrichioides* inhibiting *Venturia inaequalis*, 2725b.
 — — — — *trichothecioides*, effect of C nutrition on growth, 1921.
 — — — — — on potato, 3454.
 — — — — *tricinctum* on lucerne, 1069.
 — — — — — on maize, 1357.
Fuscladium effusum on pecan, 265, 3411.
Fusicoccin from *Fusicoccum amygdali*, opening plant stomata, 371.
Fusicoccum amygdali on almond, 2125, 2902b.
 — — — on peach, 2923.
 — — — producing fusicoccin, 371.
 — — — — *caraganae* identical with *Phomopsis caraganae*, 2345.
 — — — — *tingens* on pine, 3493.
 Fycol 8 ET against *Cephaleuros parasiticus* and *Corticium inquisum* on tea, 2628.
 Fytolan against *Exobasidium vexans*, 2170e; as seed treatment for soybean, 2708.

G-59, effect on *Penicillium digitatum* on orange, 3283.
 G-696 against *Ustilago nuda* on wheat, 108; as seed treatment for barley, 3225.
 **Gaillardia*, *Corticium solani* on, India, 85a.
 *— *aristata*, *Entyloma compositarum* on, Denmark, 322.
Galinsoga parviflora virus, Qd, properties, referred to as *Galinsoga* mosaic virus, 3720.
Galleria mellonella, effect of mycotoxins of *Entomophthora* on, 1894.
Gammoran H and *gammoran* coton as seed treatment for cotton, 3298b, c, d.
Ganoderma boninense and *G. miniatocinctum* on oil palm, 3561b.
 — *pseudoferreum* on *Hevea* rubber, 831, 1467a.
 — *tornatum* on oil palm, 3561b.
 Garlic (*Allium sativum*), *Sclerotium cepivorum* on, effect of fungicides, 1524.
 **Garrya*, *Asochyta garryae* on, UK, 1389.
 GC-3944-3-4 as seed treatment for pea, 3048.
Gemmamyces piceae on spruce, 1164.
Geotrichum candidum on potato, 1764.
 — — — polygalacturonase from, 1915.
Geranium, fungi on, USSR, 3186.

Gerbera, *Fusarium oxysporum* and *Helicobasidium purpurea* on, control, 775.
 —, *Phytophthora cryptogea* on, Netherlands, 3338; control, 775, 3338.
 —, *Sclerotinia sclerotiorum* on, control, 1051
 —, *Verticillium albo-atrum* on, Netherlands, 3338; control, 775, 3338.
 —, *dahliae* on, Netherlands, 3338.
Gibberella baccata, effect of C nutrition, 1921.
 —, *fujikuroi*, antagonism of *Labyrinthula*, 1251.
 —, effect of amino acids on growth, 3116; of storage on oxidizing activity, 1923.
 — in soil, 2772.
 — on banana, 1439.
 — on cotton, 1664, 2874.
 — on maize, see *Maize*.
 — on *Sansevieria*, 3350.
 — on sorghum, 328b.
 — on sugarcane, 545, 1928, 2624.
 — oxidizing palmitic acid, 1922.
 — producing fusaric acid, 1920.
 — var. *subglutinans* on maize, 1014.
 *— — — — on *Nerine bowdenii*, 322.
pulicaris, effect of C nutrition, 1921.
 *— — on flax, 1044.
 — — on hop, 2577.
 — — on passion fruit, 2943.
roseum on maize, 465.
 — *zeae*, effect of CO₂ and O₂, 49; of media on sporulation, 362.
 — in soil, 49.
 — inhibiting *Sclerotium cepivorum* on onion, 308a.
 — on barley, 1340.
 — on cotton, 158.
 — on maize, see *Maize*.
 — on wheat, see *Wheat*.
 — resistance to calcium cyanamide, 1553a.
Gibberellic acid, effect on tumour formation by *Agrobacterium tumefaciens*, 3588.
Gibberellin, effect on cotton boll rot, 3298a.
 **Gibellina cerealis* on wheat, 2428.
Gilbertella persicaria, taxonomy, 969.
Ginseng (*Panax quinquefolius*), *Cylindrocarpus panacis* on, Japan, 229.
Gladiolus, aster yellows on, causing 'grassy top', 2727t.
 — diseases, Spain, 1047; corm treatment, 3340.
 — fluoridated water injury, 173.
 *—, *Fusarium oxysporum* f.sp. *gladioli* on, *India, 2887; USA, 330q; *Yugoslavia, 1573; control, 172, 330q, s; effect of benomyl and thiram on corms, 3339.
 — 'grassy top', aster yellows causing, control, 2727t.
 —, *Pseudomonas marginata* on, effect of benomyl and thiram on corms and transmission by vectors, 3339.
 *—, *Sclerotinia gladioli* on, Israel, effect of allisan, 1052.
 —, *Uromyces transversalis* on, Malta, 3731c.
 — ?virus disease, transmission, 776.
 — diseases, USA, 2088.
 —, *Xanthomonas gummosudans* on, 1392.
Glasshouse crops, cement and paint solvent injury, 913.
Gliocladium roseum inhibiting *Sclerotium cepivorum* on onion, 308a.
 — in rhizosphere of lucerne, 3363.
 — — parasitic on *Corticium solani*, 51.
Gloeodes pomigena on apple, 3559.
 — on pear, 1719.
Gloeosporium, correlation with apple bitter pit, 1715.
 — *albo-rubrum* on *Hevea* rubber, 3460.
 *— *allescheri* on *Kentia forsteriana*, 2506.
 — *amygdalinum* on almond, 2902b.
 — *foliicola* on citrus, 2073.
 — *limetticola* on citrus, 2392.
 — *minus* on *Vaccinium corymbosum*, 3395.
 — *olivarum*, f.sp. of *Glomerella cingulata*, producing aspergillomarasmin B, 1744.
 — *papayae* on papaw, 3409.
 — *platani* on *Acer pseudoplatanus*, 2667.
 — *psidii* on guava, 2940.
 — *querincinum* on oak, 264.
Gloeotinia temulenta, effect of UV light on sporulation, 2282j.
 — —, non-occurrence in Germany, 2282j.
 — — on *Lolium perenne*, 183.
Glomerella cingulata, antagonism of *Labyrinthula*, 1251.
 — — associated with collar rot of tea, 1874c.
 — — degrading hydroxybenzoic acids, 1945.
 — —, effect of inoculum on growth and sporulation, 2759.
 — —, inhibited by soil streptomycetes, 374.
 — — in soil, 1966.
 — — on apple, 1709, 3376.
 — — on *Bixa orellana*, 1874b, 3422.
 — — on *Bryophyllum pinnatum*, 329f.
 — — on *Camellia*, 3324.
 — — on cassava, 658.
 — — on citrus, 758, 1025.
 *— — on coconut, 2966.
 — — on coffee, see *Coffee*.
 *— — on coriander, 816.
 — — on cotton, 3298a.
 — — on *Hevea* rubber, 831, 1467b, 2616a, b.
 — — on *Litchi chinensis*, 669.
 — — on lupin, 784.
 — — on oil palm, 3562g.
 — — on olive, 1744.
 — — on papaw, 1740a, 3410.
 ?— — on pine, 1172.
 — — utilizing monosaccharides, 667b.
 — *gossypii* on cotton, see *Cotton*.
 — *phacidiomorpha* on *Phormium tenax*, 2494.
 — *phomoides* on lucerne, 2521.
 — *phyllanthi* on *Phyllanthus acidus*, 2153.
 — *piperata* on *Capsicum*, 2277.
 — *tucumanensis* on sugarcane, see *Sugarcane*.
Gloxinia (*Sinningia speciosa*), *Phytophthora cryptogea* on, USA, associated with *Aphelelenchoides ritzemabosi*, 330m.
Glycine max, see *Soybean*.
Glyodin against *Erwinia amylovora* on apple, 2537; *Glomerella cingulata* on coffee, 2863a.
 **Gnomonia caryae* var. *pecanae* on pecan, 3018.
 — *erythrostoma*, CMI map, 84.
 — — on apricot, 1432, 3392.
 — — on cherry, 3392.
 — *rubi* on rose, 573.

GENERAL INDEX

Godronia cassandrae ff.sp. *beticola*, *cassandrae* and *vaccinii*, *G. confertus*, *G. fuliginosa*, *G. urceoliformis* and *G. viburni*, pathogenicity, 858.

Gomphrena local virus, 2522b.

— *globosa*, beet mosaic virus on, cytology, 406; nuclear changes in mesophyll cells, 405.

— —, cucumber mosaic virus str. can infect, 1478.

— —, melon vein necrosis virus can infect, 2268.

— —, *Narcissus* mosaic virus can infect, 2889.

— —, potato virus X on, 1450, 1756, 2018.

Gooseberry (*Ribes grossularia*), black currant reversion virus on, var. react., 2557.

—, *Cronartium ribicola* on, USSR, 213.

— diseases, control, 1547.

—, *Mycosphaerella ribis* on, USSR, 3394.

—, *Sphaerotheca mors-uvae* on, Advis. Leafl., 1731.

— vein banding virus on gooseberry, Advis. Leafl. on aphid vectors, 2130.

— virus diseases, review, 2924.

Gossypium, see Cotton.

Grain, fungi on, technique for assaying, 987.

—, moulds on, 635f; water requirements, 97.

— storage, The role of fungi in quality loss, book on, 638.

Gramicidin, effect on potato virus X on *Gomphrena globosa*, 1756.

Gramineae, *Cercospora herpotrichoides* on effect of crop rotation, 2282j, 2426.

—, *Cochliobolus heterostrophus* on, genetics, 65.

—, *Helicobasidium mompa* on, immunity, 1404.

—, *Sclerospora philippinensis* on, Philippines, 1360.

Graminella nigrifrons transmitting maize stunt, 5d, 459.

Graminiculous aphid virus on barley, transmission by aphids, 413.

Gramoxone against *Agrobacterium tumefaciens* on grapevine, 1446.

Granosan against *Streptomyces scabies*, 238; *Uromyces dianthi* on carnation, 169; as seed treatment for bean, 3755; beet, 2225, 3508l; cereals, 3755; Coniferae, 3023; rice, 3267; soybean, 1522, 3755.

— effect on virus diseases of potato and tomato, 1305.

— M against banana diseases, 1100; *Colletotrichum musae* on banana, 1101; as seed treatment for rice, 1372.

*Grapefruit (*Citrus paradisi*), citrus crinkly leaf virus on, USA (Fla), 330c.

— — exocortis virus on, USA, producing dwarf trees, 330e.

— — impetratura virus on, Cyprus, 1876a; Israel, indexing, 3799.

— — ringspot virus on, Italy, 146.

— — stubborn disease virus on, Italy, 145; abscission in, 2070.

— — lithium toxicity, USA, 3286.

—, *Penicillium digitatum* on, synergistic effect of gamma radiation and heat, 149.

Grapevine (*Vitis*), *Agrobacterium tumefaciens* on, Iran, 910d, 1445; Rumania, 2572; control, 1446; effect on, 2146; factors affecting, 2572; losses, 1445.

*[Grapevine], *Botryodiplodia palmarum* on, India, 812.

—, *Botrytis cinerea* on, 532; Switzerland, 2570; control, 531, 1745, 2570; effect on quality of wine, 2571; factors affecting, 531, 2571; pathogenicity, 1746; review of recent work, 3421.

—, *Cercospora viticola* on, India, 2948.

— chlorosis virus on grapevine, control and factors affecting, 531.

— chrome mosaic virus on grapevine, effect on CO_2 fixation and photosynthesis, 3417.

*—, *Cladosporium oxysporum* on, India, pathogenicity and symptoms, 2950.

— desiccation, Italy, 2951.

—, *Diplodia natalensis* on, variation, 1987c.

— diseases, USSR, 92; control, 92, 650.

—, effect of fungicides, 2946, 3593j.

—, *Elsinoe ampelina* on, 326; India, var. react., 2948.

— fanleaf virus on *Chenopodium amaranticolor*, 808.

— — — on grapevine, 2282l; Algeria, 221; Israel, 2143; control, 221, 531; effect of temp., 222; electron microscopy, 808; factors affecting, 531; non-transmission by seed, 1443; transmission by vectors, 221, 2143.

— — — on *Nicotiana clevelandii*, 808.

— — — yellow mosaic virus on grapevine, effect on CO_2 fixation and photosynthesis, 3417.

—, *Fomes igniarius* on, Italy, 2947.

*—, *Hendersonula toruloidea* on, India, isolation, pathogenicity and symptoms, 2949.

— infectious degeneration virus on grapevine, control and factors affecting, 531.

— — necrosis, Czechoslovakia, effect of nutrition, 2008h.

— leafroll virus on grapevine, Hungary, 1444; control and factors affecting, 531; non-transmission by seed, 1443.

— leaf senescence, determining viruses involved, 2566.

— lime-induced chlorosis, control, 3667.

— micro-organisms in vineyard soils, USSR, 2145.

— nutritional disorders, 913.

— 'panachure', Yugoslavia, not caused by virus, 2565.

—, *Phomopsis viticola* on, control, 1745; development, 2282l, 3420.

—, *Plasmopara viticola* on, Germany, 2567; breeding against, 809; control, 530, 531, 810, 1745, 2567, 3418, 3593a; effect of fungicides, 223; factors affecting, 531; resistance and var. react., 3419.

— potassium deficiency, Italy, symptoms, 2573.

—, *Pseudopeziza tracheiphila* on, Switzerland, 2569; control, 1745, 2569, 3418; factors affecting, 2569; variability of str., 2568.

—, *Sclerotinia fuckeliana* on, Rumania, 811.

— sowbane mosaic virus on, determining, 2142.

— stem atrophy, control, 532.

— tobacco ringspot virus on, USA, isolating and transmission, 3416.

[Grapevine] 'tsilik marasi', *Xanthomonas ampelina* causing, 813.

—, *Uncinula necator* on, 1745; Italy, 2144; control, 531, 810, 1417, 2144; factors affecting, 531.

*— virus disease, Bulgaria, 2141.

— diseases, Argentina, 3085; Czechoslovakia, 2008h; control, 326; determining, 2282l; paper on presented at 4th International Conf., Montpellier, 3414; transmission mechanically to herbaceous hosts, 3415.

—, *Xanthomonas ampelina* on, symptoms, 813.

Grass, Guatemala, see *Tripsacum laxum*.

Grasses (see also Gramineae and Turf), *Ascochyta graminicola* on, UK, 2410.

—, *Cochliobolus carbonum* on, genetics, 182.

—, *sativus* on, physiological differentiation, 2896.

—, *Drechslera*, **D. catenaria* and **D. phlei* on, USSR, 2096.

—, *Erysiphe graminis* ff.sp. on, USSR, 1057.

—, fungi on, Norway, 1691.

—, *Ophiobolus graminis* on, resistance, 1585.

—, physiological specialization of *Erysiphe graminis* in relation to, 3757.

—, *Puccinia coronata* on, 2838.

—, — *graminis* on, Kenya, 325, 2406; N. Africa, 780; nature of foci, 2802.

—, — *recondita* on, USSR, 1329.

—, *Septoria* on, USSR, 2100.

—, *Setaria* mosaic virus on, symptomless hosts, 5i.

—, sugarcane mosaic virus on, India, reservoir for, 1470.

—, *Tilletia* on, electron microscopy, 968.

—, virus diseases, Scandinavia, 424.

Griseofulvin against *Oidium chrysanthemi* on chrysanthemum and *Sphaerotheca pannosa* on rose, 2310.

—, effect on fungal growth, 3105; on *S. pannosa* on rose, 2095.

Groundnut (*Arachis hypogaea*) as indicator for strawberry latent ring-spot virus, 1158.

—, *Ascochyta arachidis* on, Argentina, *Mycosphaerella argentinensis* sexual form, 1228.

—, *Aspergillus flavus* in rhizosphere, germination, 609.

—, — on, 916; effect on gnotobiotic grown plants, 2253; pod penetration, 3534.

—, — *niger* on, 1856; India, 3535; control, 1227; germination of sclerotia, 2254; pod penetration, 3534; var. react., 3063, 3435; virulence, 916.

—, fungi in rhizosphere, interrelationships, 1523.

—, — on, antagonism between, 3533; pod penetration, 3534.

— on stored, 3742.

—, *Fusarium oxysporum* in rhizosphere, germination, 609.

—, — *solani* on, pod penetration, 3534.

— latent virus on groundnut, electron microscopy, hosts, isolation, 2286a.

—, list of dissertations and theses on, 608.

—, *Macrophomina phaseoli* on, 916; pycnidial formation, 65.

*— mosaic virus on groundnut, Nigeria, transmission by seed, 327e.

[Groundnut] mottle virus on groundnut, Uganda, component of rosette virus complex, 2286d; hosts and isolation, 2286b.

— — + groundnut stunt virus on groundnut, 1225.

—, *Mycosphaerella* on, control, 328c.

—, — *arachidis* on, effect on amino acids and carbohydrates in leaves, 3532; var. react., 3531.

—, — *argentinensis* on, Argentina, sexual form of *Ascochyta arachidis*, 1228.

—, — *berkeleyi* on, effect of light on sporulation, 2251; metabolic changes in leaves, 3060.

—, *Penicillium funiculosum* and *P. rubrum* on, 1856.

—, *Pseudomonas solanacearum* on, var. react., 307.

—, *Puccinia arachidis* on, screening for resistance, 3062.

—, *Pythium* on, var. react., 307.

—, — *debaryanum* on, India, hosts, 3061.

—, — *myriotylum* on, Tripolitania, ?imported from U.S.A., 2252; U.S.A., factors affecting, 2250; *Fusarium* associated with, 2252.

—, *Rhizopus* on, 1227.

— rosette virus on groundnut, Uganda, 2286d; Zambia, 636b; components, 2286d; transmission, 2712.

— stunt virus on bean, 2228.

— — on groundnut, Senegal, 306a, b; effect of insecticides, 916, 2711; effect on, 1225; non-transmission by soil, 306b; transmission by grafting and by sap, 306a.

— — western str., hosts, properties and purification, 1226.

— — + groundnut mottle virus on groundnut, effect on, 1225.

— stunting virus from rosetted groundnuts, 2286c.

—, *Verticillium dahliae* on, var. react., 307.

— virus str., differentiation and properties, 2286g.

— yellow dwarfing, Senegal, 306b.

Guava (*Psidium guajava*), *Botryodiplodia theobromae* on, study, 1743.

—, *Cercospora psidii* and *C. sawadae* on, India, control, 1742.

— diseases, India, 87, 1742; control, 1742.

—, *Gloeosporium psidii* on, control and factors affecting, 2940.

—, *Macrophoma allahabadensis* on, India, description, 3407.

—, *Pestalotia psidii* and *Phoma psidii* on, India, control, 1742.

Guide to fungi of the Ukraine, Vol. 1, 1544; Vol. 2, 60.

Guignardia citricarpa on citrus, 1025, 2075.

— — on orange, 2074.

**Guizotia abyssinica*, *Xanthomonas guizotiae* var. *indicus* on, India, hosts, and pathogenicity, 1108.

Gymnosporangium clavipes, aeciospore release, 35.

— *cupressi* on *Amelanchier alnifolia*, 867.

— *gaeumannii* on *Juniperus*, 257e.

— *globosum* and *G. juniperi-virginianae*, aeciospore release, 35.

**Hamelia patens*, *Uredo hameliae* on, USA (Fla), 174.
 Harvesan as seed treatment for soybean, 2708; wheat, 3211.
 Hay, *Mastigosprium album* on, Scotland, 1870b.
 Heat treatment against *Chrysanthemum* stunt virus on *Chrysanthemum*, 2884; prune dwarf virus and *Prunus* necrotic ringspot virus on cherry, 1087; tobacco frenching, 251; tobacco mosaic virus on tomato, 252; tomato aspermy virus on *Chrysanthemum*, 2883; virus diseases of carnation, *Chrysanthemum* and potato, 909s; of soil against wheat virus, 2413.
 —, effect on acquired resistance of tobacco to tobacco mosaic virus, 3474; rose mosaic and variegation, 1538t; sugar-cane streak virus, 2618c.
Hedysarum coronarium crinkly mosaic virus on *H. coronarium*, transmission, 910g.
 Heliantheae, *Puccinia caborcensis* and *P. sonorae* on, description, 385.
Helianthemum, *Leveillula taurica* on, UK, 1389.
Helianthus annuus, see Sunflower.
 **Helichrysum bracteatum*, *Bremia lactucae* on, NSW, 3738.
Helicobasidium mompa on Gramineae, 1404.
 — *purpureum* on *Gerbera*, 775.
 *— — on *Phaseolus atropurpureus*, 2899.
 **Helipterum album* and **H. roseum*, *Erysiphe cichoracearum* on, India, 1671.
 **Helminthosporium coici* on *Coix gigantea*, 1634.
 — *dictyoides*, see *Drechslera dictyoides*.
 — *giganteum*, see *Drechslera gigantea*.
 — *halodes*, see *Drechslera halodes*.
 — *heveae* on *Hevea* rubber, 831, *1468, 2614c.
 *— *holmii* on *Dactyloctenium aegyptium* and *Paspalum scrobiculatum*, 2894.
 *— *incurvatum* on coconut, 329e.
 — *leucostylum* on maize, 2054.
 — *papulosum* f.sp. *pyri* on pear, 3380.
 — *pedicellatum* on maize, 3783a, b.
 — *rostratum* on jasmine, 1933.
 — — on turf, 2515.
 — *sacchari*, see *Drechslera sacchari*.
 — *siccans* on *Lolium multiflorum*, 2099.
 — *sigmoideum* var. *irregularare* on rice, 2058, 3798.
 — *solani* on potato, see Potato.
 — *vagans* on *Festuca arundinacea*, 181.
 — — on *Poa pratensis*, 3358.
Hemispora stellata on grain, 97.
 Hemp (*Cannabis sativa*), *Agrobacterium tumefaciens* and *Erwinia tracheiphila* on, 166.
 —, *Fusarium oxysporum* on, factors affecting, 1388.
 —, *Pseudomonas cannabinae*, *P. mellea* and *P. mori* on, 166.
 Henbane (*Hyoscyamus niger*) diseases, 814.
 — mosaic virus, behaviour of variant, 3077h.
 —, potato virus X and tobacco mosaic virus on, 3711.
 **Hendersonia palmigena* on coconut, 2966.
 *— *toruloides* on grapevine, 2949.
Henosepilachna vigintioctopunctata transmitting squash mosaic virus, 622.
Heracleum sphondylium, *Cephalosporium*, *Phoma acuta* and *Stachybotrys atra* on, growth and sporulation, 3640.
 — virus, transmission by vectors, 3555n.
 Herbicides, effect on *Begonia*, 2085; *Corticium rolfsii*, 3103; *C. solani* on maize, 2844; *Erysiphe graminis* on wheat, 3769; *Fomes annosus* on *Tsuga heterophylla*, 3030; *Fusarium oxysporum* f.sp. *vasinfectum* in soil, 3130; mushroom, 2727g; potato virus Y on tobacco, 1770; *Pythium arrhenomanes* on maize, 2844; soil fungi, 3663; tobacco mosaic and veinal necrosis viruses on tobacco, 1770; *Ustilago maydis* on maize, 462.
Hercospora tiliae on *Tilia americana*, 1496.
 Hercules 3944, toxicity to tomato, 1784.
 Hermal as seed treatment for kale, 1502.
 Hexa as seed treatment for barley, 3225.
 Hexasan against *Sphacelotheca cruenta* on sorghum, 1361.
Hibiscus cannabinus, *Cristulariella pyramidalis* on, 770.
 —, *Phytophthora nicotianae* var. *parasitica* on, Puerto Rico, 166.
 — *esculentus*, *Choanephora cucurbitarum* on India, 1863.
 —, *Corticium rolfsii* on, India, susceptibility, 3074.
 *— —, *solani* on, India, 85a.
 —, *Macrophomina phaseoli* on, control, 2279.
 — — mosaic virus, Nigeria, 328f.
 —, *Verticillium dahliae* on, var. react, 3550.
 *— *sabdariffa*, *Agrobacterium tumefaciens* on, Egypt, 344.
 —, *Phytophthora nicotianae* var. *parasitica* on, Puerto Rico, 166.
 — var. *altissima*, *Corticium solani*, *Fusarium solani* and **Phytophthora nicotianae* var. *parasitica* on, Nigeria, 2082.
 Hinosan, effect on *Pyricularia oryzae*, 3560f.
Hippeastrum mosaic virus on *Hippeastrum*, electron microscopy and particles, 3341.
 Hoe 2873, new systemic fungicide, 2727b.
 Hoe 2874 as seed treatment for barley, 3225.
 Holly, *Cylindrocladium* on, USA, *C. aesculicola* proposed as name, pathogenicity, 3084b.
 Hollyhock (*Althaea rosea*), *Phytophthora megasperma* var. *sojae* on, susceptibility, 1849.
Hop (*Humulus*), *Aecidium* on, Ethiopia, 918.
 —, *Arabis* mosaic virus on, effect on yield, and spread, 2725i.
 —, *Botrytis cinerea* on, control, 1747.
 —, *Erysiphe* on, control, 2308e.
 —, *cichoracearum* on, Ethiopia, 918.
 —, *Gibberella pulicaris* on, Germany (E.), 2577.
 — leaf curl, Germany (E.), 2575; analysis, 2008a.
 — — — and hop mosaic viruses on hop, Poland, factors affecting, 1537g.
 — necrotic crinkle mosaic virus, serotype of *Prunus* necrotic ringspot virus, 2008a.
 — nettlehead, *Arabis* mosaic virus causing, 2725i.
 — — —, Czechoslovakia, 2576; Poland, 1537g.
 —, *Pseudoperonospora humuli* on, Germany (E.), 2284; Poland, 1537i; control, 1747.

GENERAL INDEX

[Hop], *Sphaerotheca humuli* on, control, 1747.
 —, *Verticillium albo-atrum* on, study, 2725f.
 — virus diseases, method for testing, 2574; research, 2008a.
Hordeum vulgare, see Barley.
Hormiscium lechlerianum on sisal, 3319.
Hornbeam (*Carpinus betulus*), *Nectria cinnabarinata* on, 573.
Hostaquick against *Pseudomonas pisi* on pea, 2697.
 Hot air treatment against strawberry decays, 2935; for separating apple Virginia crab decline virus from a complex, 3368.
 — water treatment against aster yellows on *Gladiolus*, 2727t; *Botryosphaeria corticis* on *Vaccinium corymbosum*, 2129; 'grassy top' of gladiolus, 2727t; *Monilinia* and *Rhizopus* on stone fruit, 2119; moulds on cantaloupe, 3071; *Pezicula alba* on apple, 1708; post-harvest rots of papaw, 1740a; sugarcane chlorotic streak and mosaic viruses, 3462; sugarcane grassy shoot virus, 1127; sugarcane ratoon stunting virus, 3463; sugarcane streak virus, 2619; as seed treatment for barley, 1342; *Verticillium albo-atrum* on cotton, 153c; celery, 2713; sesame, 2961.
 — — —, effect on *Penicillium expansum* on apple, 203.
Humicola grisea in rhizosphere of bean, 3520.
 — — — on strawberry, 1096.
Humulus, see Hop.
Hyacinth (*Hyacinthus*) diseases, Spain, 1047.
 —, *Erwinia carotovora* on, 1392.
 —, *Pythium ultimum* and *P. violae* on, effect of dexton, 777.
 — stalk break, 1390.
 — virus, Denmark, related to *Narcissus* mosaic virus, 322.
 — — —, similar to lily mosaic virus, 1670.
 —, *Xanthomonas hyacinthi* on, 1392; Japan, inoculating and symptoms, 3342.
Hydaphis erysimi pseudobrassicae transmitting 'Kwuting' virus on Chinese cabbage, 1501.
Hyalesthes obsoletus transmitting stolbur, 497, 2275, 2599, 3172.
Hydrangea ringspot virus on *Hydrangea*, Sweden, 1398.
Hydrazolone against *Podosphaera leucotricha*, 513.
 4-Hydroxybenzaldehyde in leaf wound sap of *Phaseolus lunatus*, fungitoxicity, 2235.
 8-Hydroxyquinoline sorbate against *Pezicula malicorticis* and *Trichoseptoria frutigena* on apple, 515.
Hymenomycetes, *Curvularia can* infect, 919a.
Hymenomycetes on timber, 2689.
Hyoscyamus niger, see Henbane.
Hyperomyzus lactucae, transmitting sow-thistle yellow vein virus, 3723.
Hyphomycetes on timber, 2683.
 —, time-lapse studies of conidiophore and conidium ontogeny, 332d.
Hypocrea rufa, perfect state of *Trichoderma viride*, 552.
Hypocreales, anaerobic growth, 359.
Hypomyces solani f.sp. *cucurbitae*, effect of tyrosinase and cold on permeability, 1926.
 — — — — on squash, 1860.
 — — — —, pectate lyase formation, 1925.
 — — — —, production of perithecia and microconidia, 628.
Hypoxyylon fuscum on alder, 260d.
 — *mammatum* on *Acer saccharum*, 2661.
 — — — on aspen, 257d.
 — *pruinatum* on aspen, 271, 576.
 — *rubiginosum* on timber, 285c, 1287.
 — *serpens* on tea, 2170c.
 IAA, effect on pine mycorrhiza, 2747.
 IBP against *Pyricularia oryzae*, 2308t.
Iconographia Mycologica XXIV, 384; XXV, 1293; XXVI, 3132.
Ilex, see Holly.
Imanin, effect on potato virus X on *Gomphrena globosa* and tobacco, 1756.
 Indole butyric acid against *Rhododendron* diseases, 3347.
Inonotus arizonicus on *Acer pseudoplatanus*, 1161.
 Insecticide and fungicide handbook for crop protection, 3rd edition, 15.
 Insecticides against vectors of cucumber green mottle mosaic virus, 624; groundnut stunt virus, 2711; oat sterile dwarf virus, 3779; potato leaf roll virus, 3445; potato viruses, 824; as seed treatment for cotton, 3298b.
 — — —, effect on *Corticium solani*, 3649; infectivity of tobacco mosaic virus, 2986.
 — — — and fungicides, Guide to the use of, in S. Africa, 1266.
 Insects in relation to *Aspergillus niger* on plum, 2126; *Ceratocystis fimbriata* on stone fruit, 211; cotton boll rot, 2079; *Cucurbitothis pithyophila* on Coniferae, 1164.
 — — — transmitting ?coconut coronie wilt and lethal yellowing, 3564b; ?*Fomes annosus*, 875; *Pseudomonas solanacearum*, 2735.
Ipomoea, *Xanthomonas uppalii* on, albino culture, 639.
 — *aquatica*, *Albugo ipomoeae-aquaticae* on, Hong Kong, 1534.
 — *batatas*, see Sweet potato.
Iris, *Bipolaris iridis* on, control, 909f.
 —, *Fusarium oxysporum* f.sp. *gladioli* on, control, 2505.
 —, *Mycosphaerella macrospora* on, physiology, 175.
 —, *Sclerotinia convoluta* on, symptoms, 2089.
 Iron deficiency in oats, 913.
 — sulphate against *Pseudomonas savastanoi* on olive, 1442.
Irpea pachyodon, antibacterial activity of mycelia, 3607b.
 Irradiation, effect on soil fungi causing damping-off, 2336; *Ustilago hordei* and *U. nigra* on barley, 3777; *Verticillium dahliae* on peppermint, 3424.
 — ineffective against *Diplodia natalensis* on mango, 2941.
 Irrigation as source of inoculum of *Centrospora acerina*, 1526.
 — — —, effect on bean bacteriosis, 1517; *Cercospora beticola*, 3513; *Erysiphe communis* f.sp. *trifolii* on red clover, 3359; *Fusarium oxysporum* f.sp. *corianderii* on coriander,

GENERAL INDEX

2953; *Phytophthora drechsleri* on cucubits, 1530; *Phytophthora infestans*, 3447, 3448; rice straighthead, 2728a; *Sclerotinia fructicola* on peach, 798; *Streptomyces scabies*, 3457; *Ustilago maydis*, 2457.

Isariopsis griseola on bean, 326, 2805. Isotox against *Phytophthora cryptogea* on gloxinia, 330m.

Itaconimides, fungicidal activity, 1549.

Itersonia pastinaceae, N.Z., 3183. — on parsnip, 1233.

Jasmine (*Jasminum*) *Cercospora jasminicola* on, morphology and spore germination, 2090.

—, *Helminthosporium rostratum* on, utilization of carbohydrates, 1933.

Javesella pellucida transmitting oats sterile dwarf virus, 3229.

JFCC catalogue of cultures, 971.

Johnson grass, see *Sorghum halepense*.

Juglans, see Walnut.

**Juniperus*, *Gymnosporangium gaeumannii* on, Canada, 257e.

—, *Phomopsis juniperovora* on, USA, resistance in epidemics, 2673.

— *chinensis*, *Phomopsis juniperovora* on, effect of leaf diffusates, 2672.

— *nana*, *Muellerites juniperi* on, 1164.

— *virginiana*, *Phomopsis juniperovora* on, effect of leaf diffusates, 2672.

Jute (*Corchorus capsularis* and *C. olitorius*), *Corticium* on, induction of basidiospores, 1999.

—, — *solani* on, Taiwan, causing damping-off, 961.

—, *Macrophomina phaseoli* on, pectic enzyme in relation to stem rot and retting, 164; physiologic specialization, 1045.

—, *Pseudomonas solanacearum* on, India, biochemical characters, 2495.

—, *Xanthomonas nakatae* var. *fascicularis* not infecting, 2083.

Kabatiella caulincola on clover, 1059.

— *zeae* on maize, 5e.

**Kabatina thuja* on *Cupressus arizonica*, 3500.

Kalanchoe daigremontiana, *Agrobacterium tumefaciens* on, growth substances in tumours, 2301.

Kale (*Brassica oleracea* var. *acephala*), *Peronospora parasitica* on, 1502.

Kanamycin against *Pseudomonas savastanoi* on olive, 1442.

Karamate against *Pseudopeziza ribis* on currant, 2307q.

Karathane against *Erysiphe cichoracearum* on Cucurbitaceae, 313; on squash, 1239; on vegetable marrow, 2271; *E. graminis* on wheat, 1602; *Leveillula taurica* on Solanaceae and tomato, 1321; *Oidium euonymi-japonica* on *Euonymus japonicus*, 1397; papaw diseases, 1740a; *Podosphaera leucotricha*, 2105; *Sphaerotheca mors-uvae* on currant, 2559; *S. pannosa* var. *persicae* on peach, 1090; *Uncinula necator*, 810. —, effect on fruit set of apple, 2535.

—, see also Dinocap.

Keithia tsugae on *Tsuga canadensis*, 1815.

**Kentia forsteriana*, *Gloeosporium allescheri* on, Italy, cultural characters, 2506.

Kerling, Professor, her life and work, 3086.

Khuskia oryzae on cotton, 158.

— on maize, 1014, 2054, 2465.

Kinetin, effect on tumour formation by *Agrobacterium tumefaciens*, 3588; on *Venturia inaequalis*, 1699.

Kitazin, effect on rice mycoflora, 139.

Kochia prostrata, *Camarosporium punctiforme*, *Ramularia kochiae*, *Stegano sporium bubakianum* and *Uromyces kochiae* on, 496.

Kocide against *Phytophthora palmivora* on cacao, 423.

Kohlrabi (*Brassica oleracea* var. *caulo-rapa*), molybdenum deficiency, 913.

—, *Peronospora parasitica* on, factors affecting sporulation, 2282d; infection in relation to conidial concentration, 1316.

Kola (*Cola acuminata*) new disease and stem swelling, Nigeria, 721a.

Kubekol against *Cercospora beticola*, 3508d.

Kundmannia sicula, *Entyloma kundmanniae* on, Morocco, 2342.

Kupricol against *Peronospora parasitica* on kale, 1502; *P. tabacina*, 250.

‘Kwutung’ virus on Chinese cabbage, 1501.

Lablab niger, *Corticium rolfsii* on, India, resistance, 3074.

—, *Mycosphaerella cruenta* on, India, 606.

—, soybean mosaic virus can infect, 3528.

—, *Xanthomonas phaseoli* on, Sudan, dissemination, survival and transmission by vectors, 305.

Laboratory manual for general microbiology, book, 1256.

Laccaria laccata on pine, forming mycorrhiza, 1911.

**Lachnellula flavovirens* on pine, 257f.

— *occidentalis* and *L. suecica* on larch, 868.

Lactuca sativa, see Lettuce.

Lagenaria leucantha mosaic virus, India, ?str. of *L. vulgaris* mosaic virus, 2714.

— *siceraria*, cucumber green mottle mosaic virus on, India, transmission by vectors, 624.

—, mycoflora on seed, 2273.

— *vulgaris*, *Erysiphe cichoracearum* on, control, 313.

**Lambertella cornimaris* on apple, 202.

**Lamium amplexicaule*, plum pox virus on, 3387.

Lannate ineffective against *Verticillium dahliae* on strawberry, toxicity to strawberry, 2932.

Landstan ineffective against *Verticillium dahliae* on strawberry, 2932.

Laodelphax striatellus, maize rough dwarf virus in, electron microscopy, 457.

—, northern cereal mosaic virus in, multiplication, 722.

—, phagocyte vesicles in, 2052.

—, rice stripe virus in, localization, 751b.

—, transmitting cereal bullet-shaped virus, 1581; maize rough dwarf virus, 1626; northern cereal mosaic virus, 722; rice stripe virus, 751b, 1365.

GENERAL INDEX

Larch (*Larix*), *Cucurbitothis pithyophila* on, effect of insects, 1164.
 — dieback, UK, 869.
 —, *Encoeliopsis laricina*, *Lachnellula occidentalis*, *L. suecica* and *Mytilidion gemmigenum* on, Canada, 868.
 *—, *Scirrhia pini* on, NZ, 273.
 —, sensitivity to ozone, 857.
 —, *Trichoscyphella willkommii* on, 573; UK, causing canker, 869.
 —, *Tympanis laricina* on, Canada, 868.
Larix, see Larch.
Lathyrus, *Uromyces viciae-fabae* on, screening germ-plasm for resistance, 2706.
 — *odoratus*, see Sweet pea.
 *— *sativus*, *Cercospora lathyrina* on, Czechoslovakia, 717.
 — —, *Uromyces pisi* f.sp. *lathyri* on, germination and survival of spores, 2103.
Laurus nobilis, *Macrophoma georgica* on, 1681.
 — —, *Verticillium albo-atrum* on, factors affecting, 2507.
 Lavender (*Lavandula*) wilt in relation to stolbur, 497.
 Leafhoppers transmitting ?virus causing *Melinis minutiflora* stunting disease, 1686.
 Lecithin against apple Jonathan spot, 794.
Ledum glandulosum, *Chrysomyxa ledi* var. *glandulosi* on, USA, overwintering, 1179.
 — *groenlandicum*, *Pseudophacidium ledi* on, Canada, 1497.
 *Leek (*Allium porrum*), *Phytophthora porri* on, Norway, 3537.
 *—, *Pyrenopeziza terrestris* on, Italy, 1569a.
 Legislation against plant diseases in Afghanistan, 1910; Africa, 3459; Australia, 3273; Canada, 3610; Caribbean, 2729; Denmark, 1085, 3609; Germany, 2317, 2528; Italy, 1554; Lebanon, 1554; Norway, 1466, 2317; NSW, 2728; Pacific region, 3459; S.E. Asia, 1126, 3459; Sweden, 1909; UK, 1555; USA, 356, 2292, 3109, 3609.
 Legume little leaf disease on cowpea, 2798.
 Leguminosae, bean common and bean yellow mosaic viruses on, Spain, 1836.
 *—, *Cercospora* on, India, 3672.
 —, pea mosaic virus on, Spain, 1836.
 —, peach virus can infect, 3565d.
 —, potato Y group viruses on, Netherlands, 1538k.
 — virus diseases, Finland, 3691; Japan, 1512; Netherlands, 3514; Scandinavia, 3691; Spain, 1836; classifying, 1512, 1836; study, 3691; transmission by seed, 1512.
 — V virus (new), Spain, 1836.
 Lemon (*Citrus limonia*), *Candida krusei* on, biphenyl ineffective against, 3282.
 —, citrange stunt virus on, Chile, 2480.
 *—, citrus crinkly leaf virus on, USA (Fla), 330c.
 —, — exocortis virus on, study, 475.
 —, — impietratura virus on, Israel, indexing, 3799.
 —, — ringspot virus on, Italy, 146.
 —, — tatter leaf virus on, Chile, 2480; *NSW, 3738.
 —, — — +citrange stunt viruses on, transmission mechanically, 3275.
 —, — tristeza virus on, Brazil, 1375; Chile, 2480.
 —, effect of air pollution, 2484, 3801.
 [Lemon], *Fusarium* on, control, 479.
 —, micro-organisms on, classification, 482.
 —, *Pythium* and *Rhizoctonia* on, control, 479.
 — storage disorders, control, 3282.
 — wood pocket disease, Sicily, 3276.
 Lentil (*Lens esculenta*), ?*Botrytis cinerea* on, control, 3516.
 —, fungi in rhizosphere, India, 2247.
 —, *Fusarium oxysporum* on, control, 3516.
 —, pea enation mosaic virus can infect, 292.
Lentinus lepidus on timber, 1183, 2691.
Lenzites saeparia, basidiospore germination, 2690.
 — *striata* on timber, 587.
 — *trabea* on timber, 285b, c, 2691.
Lepidium sativum in soil, 3660.
Leptosphaeria avenaria on oats, 2411.
 — *coniothyrium* on rose, 3349.
 — *iwamotoi* on rice, 2058.
 — *libanotis* on carrot, 1527.
 — *maculans* on colza, 1822.
 — — on turnip rape, 3504.
 — *nodorum*, factors affecting sporulation, 2823, 3120.
 — — on *Agropyron*, 2100.
 — — on cereals, 426.
 — — on wheat, see Wheat.
 — *sacchari* on sugarcane, 1767.
 — *salvinii*, effect of medium on respiration, 3114.
 — — on rice, 138.
 — —, physiological studies, 367, 1942.
Leptosphaerulina trifolii on clover, 635e.
 *— — on wheat, 1337.
 Lettuce (*Lactuca sativa*) big vein virus on lettuce, Israel, *Olpidium brassicae* associated with, 3182a.
 — — — — transmitted by phycomycetes, 415.
 —, *Botrytis cinerea* on, control, 1529.
 —, *Bremia lactucae* on, Netherlands, 1538x; physiologic races, 1538x, 3555b; var. react., 3555b.
 —, cucumber mosaic virus on, UK, weeds as source of infection, 3555i.
 —, effect of soil sterilization by steam, 1235.
 — hollow stalk, factors affecting, 2259.
 — mosaic virus, CMI/AAB description, 3151.
 — — —, control, 1575d.
 — — —, epidemiology, 1234.
 *— — — on lettuce, *Irish Repub., 3558a; *Nigeria, 328f; USA, 3067; genetics, 619; non-transmission by seed, 620; screening for resistance, 2258; transmission by vectors, 3067.
 —, mycoflora on roots, Lebanon, 716.
 —, *Mycosphaerella cruenta* on, India, 606.
 — necrotic yellows virus, control, 1575d.
 — nutritional disorders, 913.
 —, *Olpidium brassicae* on, transmitting tobacco necrosis virus, 3702.
 —, *Sclerotinia minor* on, control, 1529.
 — tipburn, control, 621.
 —, tobacco necrosis virus on, transmission by *Olpidium brassicae*, 3702.
 —, turnip mosaic virus on, USA, 903; identification, 1819; var. react., 903, 1819.
Leucocorinus birnbaumii in peat substrate of cactus, 1048.

GENERAL INDEX

**Leveillula leguminosarum* f. *ammothamni*, USSR, biology, 3366.
 — *taurica* on artichoke, 1389.
 — — on *Capsicum*, 1877b.
 — — on *Cynara cardunculus* and *Helianthemum*, 1389.
 — — on papaw, 1740a.
 — — on Solanaceae, 1321.
 — — on tomato, 1321, 1487.
 — — f.sp. *salsicola*, USSR, biology, 3366.
 Levorin against cotton wilt, 158.
 Lichens, effect on wood-destroying fungi, 2686.
 Light, effect on *Botryodiplodia theobromae* pycnidia, 32; on *Ophiobolus graminis*, 2830.
 — microscopy of cells infected by tobacco necrosis and satellite viruses, 3161.
Ligustrum, see Privet.
 Lilac (*Syringa vulgaris*) virus diseases, 2008g.
 Lily (*Lilium*), *Colletotrichum dematium* on, var. react., 2888.
 —, cucumber mosaic virus on, electron microscopy, 498.
 — diseases, USA, review, 2091.
 —, *Fusarium oxysporum* on, Netherlands, 1538h.
 —, — f.sp. *lilii* on, var. react., 2888.
 — mosaic virus, comparison with tulip breaking virus, 1670.
 — — on lily, USSR, 1391.
 —, *Nectria radicicola* on, var. react., 2888.
 — symptomless virus on lily, electron microscopy, 498, 1053.
 Lima bean, see *Phaseolus lunatus*.
 *Lime (*Citrus aurantiifolia*), citrus crinkly leaf virus on, USA (Fla), 330c.
 —, — exocortis virus on, study, 475.
 —, — ringspot virus on, transmission by dodder, 1373.
 — Hassaku dwarf, citrus tristeza virus causing, 757.
 —, micro-organisms on fruit, classification, 482.
 — induced chlorosis in plants, 3667.
 — tree, see *Tilia*.
Limonium perezii, turnip mosaic virus on, USA, 176.
 Linseed (*Linum usitatissimum*), *Fusarium oxysporum* f.sp. *lini* on, new race, 163.
 —, *Sclerotium cepivorum* on, 720.
Linum usitatissimum, see Flax, Linseed.
 Linuron against weeds, 3557h.
Liquidambar styraciflua, *Endogone* on, forming mycorrhiza, 1273.
 **Liriodendron tulipifera*, **Cylindrocladium crotalariae*, *C. floridanum* and *C. scoparium* on, USA, causing root rot, 3016.
 — — mycorrhiza, types of, 1556.
 Lirocarmazin against *Gerbera* diseases, 775.
 Liro-matin against *Phytophthora infestans* on potato, 1537l.
 Lirostanol against *Cercospora beticola*, 3513.
 **Lirula nervisequia* var. *conspicua* on *Abies bracteata*, 3024.
Litchi chinensis, *Botryodiplodia theobromae*, *Glomerella cingulata* and *Pestalotia pauciseta* on, response to amino acids, 669.
 Lithium toxicity in grapefruit, 3286.
 Loganberry (*Rubus ursinus* var. *logan-baccus*) degeneration virus, properties and transmission by pollen and seed, 2928.
Lolium diseases, Japan, 179a.
 —, *Ophiobolus graminis* var. *avenae* on, overwintering, 635d.
 —, *Sphaerella ceres* on, 635e.
 —, *multiflorum*, *Cercosporaella herpotrichoides* on, effect of crop rotation, 2426.
 — —, cocksfoot streak virus on, Germany (E.), 2514.
 — —, *Helminthosporium siccans* on, factors affecting, 2099.
 — —, oats sterile dwarf virus can infect, 3229.
 — —, *Pseudomonas coronafaciens* on, factors affecting, 2099.
 — —, *Puccinia graminis* on, Kenya, 2406.
 — —, *Pythium aphanidermatum* on, control, 1900.
 — —, seedborne pathogens, 2282j.
 — —, *perenne*, cocksfoot streak virus on, Germany (E.), 2514.
 — —, *Corticium fuciforme* on, 635e.
 — —, *Gloeotinia temulenta* on, comparison of Netherlands and UK isolates, 183.
 — —, moulds on, NZ, 2517.
 — —, oats sterile dwarf virus can infect, 3229.
 — —, *Puccinia coronata* on, overwintering, 635d.
 — —, seedborne pathogens, 2282j.
 — —, litter, moulds on, NZ, 2517.
 Lonacol against *Colletotrichum lagenarium* on cucurbits, 2717.
Longidorus attenuatus transmitting tomato black ring virus, 3701.
 —, *elongatus* transmitting raspberry ringspot and tomato black ring viruses, 414; location in, 979.
Lophodermium pinastri in the air, 1811.
 — — on pine, see Pine.
Loquat (*Eriobotrya japonica*), *Spilocaea eriobotryae* on, Cyprus, 911; *UAR (Egypt), conidiophore morphology, 2138; control, 911.
 **Lotus angustissimus*, *Cercospora* on, NSW, causing leaf spot, 3738.
 —, *corniculatus*, *Corticium solani*, *Fusarium oxysporum*, *Macrophomina phaseoli* and *Mycoleptodiscus terrestris* on, 510.
 — —, *Stemphylium loti* on, association of cyanide with, 2102.
 — —, tobacco ringspot virus on, 1248d.
 *— *uliginosus*, *Ramularia sphaeroidea* on, NSW, 3738.
 Lovozal against pineapple diseases, 3412.
 LP64-1027 and LRD66-18 as seed treatment for cotton, 3298b, c.
 Lucerne (*Medicago sativa*), alfalfa mosaic virus on, Hungary, 1409; USSR, 1063, 3362; Yugoslavia, 1064; effect on yield, 1409; electron microscopy, 3362; leaf infection, 3716; str. and transmission, 1064.
 —, *Alternaria* on, morphology, 507.
 —, bean yellow mosaic virus on, USSR, 1063.
 —, *Corticium solani* on, effect of substrate on pathogenicity, 1411.
 —, *Corynebacterium insidiosum* on, Czechoslovakia, 186; non-occurrence in NSW, 2728b; resistance, 3556f.
 —, cucumber mosaic virus on, USSR, 1063, 2520; Yugoslavia, transmission by sap and vectors, 1064.

GENERAL INDEX

[Lucerne] damping-off, 504.
 — diseases, 783; Denmark, 2898; Japan, 179a; control, 2898.
 —, effect of volatile substances from, on soil micro-organisms, 53, 1064, 1067.
 —, fungi in rhizosphere, USSR, 1961; effect on, and pathogenicity, 3363.
 —, fungi on, accumulation of coumestrol, 3364.
 —, *Fusarium* on, control, 783.
 —, — *oxysporum* f.sp. *niveum*+*Pratylenchus penetrans* on, interrelationship, 1070.
 —, — var. *medicaginis* on, factors affecting, 1413; pathogenicity, 509.
 —, — *redolens* on, effect of substrate on pathogenicity, 1411.
 —, — *tricinctum* on, effect on root and crown carbohydrate levels, 1069.
 —, *Glomerella phomoides* on, effect on phytoalexin, 2521.
 —, pea enation mosaic virus on, Belgium, serology, 411.
 *—, *Phytophthora megasperma* on, USA (Iowa, Neb., S. Dak., Wis.), 185.
 —, *Pleospora herbarum* on, Bulgaria, 1412; control, 507; formation and degradation of phytoalexin, 1065a, b; morphological characteristics, 507.
 —, ?*Pseudomonas syringae* on, Yugoslavia, 1414.
 —, *Pythium debaryanum* on, effect of substrate on pathogenicity, 1411.
 —, *Stemphylium botryosum* on, non-occurrence of phytoalexin in, 1065b.
 —, — *loti* on, effect on phytoalexin, 2521.
 —, *Trichoderma viride* on, effect of substrate on pathogenicity, 1411.
 —, *Trichometasphearia turcica* on, formation and degradation of phytoalexin, 1065a.
 —, *Verticillium* on, resistance, 3556f.
 —, — *albo-atrum* on, screening for resistance, 508, 2101; topographic studies, 1068; var. react., 3078a.
 —, — *dahiae* on, screening for resistance, 508.
 — virus on lucerne, Spain, hosts and ultra-structure, 1410.
 **Luffa*, *Cephalosporium zonatum* on, Nigeria, 327e.
 — *cylindrica*, *Choanephora cucurbitarum* on, India, 1863.
 —, *Pythium butleri* on, hosts, 1862.
 **Lupin* (*Lupinus*), *Alternaria*, *Aspergillus flavus*, *A. niger* and *Curvularia* on, effect on sound and damaged seed, 784.
 —, *Erwinia carotovora* on, USSR, 187, *1695.
 —, *Fusarium bulbigenum* and *F. oxysporum* on, Poland, spec. react., 1537h.
 —, *Glomerella cingulata* on, effect on sound and damaged seed, 784.
 — narrow-leaf virus on lupin, meiosis abnormalities, 1415.
 —, *Phytophthora megasperma* on, 504.
 —, — var. *sojae* on, spec. react., 1849.
 —, *Pleiochaeta setosa* on, effect on sound and damaged seed, 784.
 —, *Pseudomonas lupini* and *P. xanthochlora* on, USSR, 187.
 *—, *Rhizopus stolonifer* on, effect on sound and damaged seed, 784.
 Luxan dodine against *Blumeriella jaapii* on cherry, 190c.
Lycium halimifolium, cucumber mosaic virus on, Germany (E.), reservoir of infection and transmission by vectors, 3721.
Lycopersicon esculentum, see Tomato.

 M-45 against *Alternaria dauci* on carrot, 616.
 M2452 against *Erysiphe cichoracearum* on vegetable marrow, 2271.
Macrophoma allahabadensis, oligosaccharide synthesis, 3637.
 — — on guava, 3407.
 — *georgica* on *Laurus nobilis*, 1681.
 — *musarum* on banana, 1097.
Macrophomina phaseoli, growth limitation, 3621.
 — —, hosts, 65, 1576.
 — — in soil, 1973, 3662.
 — — on cantaloupe, 623.
 — — on cotton, 488.
 — — on groundnut, 916.
 — — on *Hibiscus esculentus*, 2279.
 — — on jute, 164, 1045.
 — — on *Lotus corniculatus*, 510.
 — — on maize, 2054, 3783, a, b, c.
 — — on melon, 625.
 *— — on *Phaseolus mungo*, 2705.
 — — on pine, 1807, 2674.
 — — on potato, 1124.
 — — on radish, 3731a.
 — — on sorghum, 2849.
 — — on soybean, 607.
 *— — on sunflower, *2962, 3429.
 — —, pycnidial formation, 65.
 — —, ultrastructure of sclerotinia, 2731.
Macrosiphum avenae transmitting barley yellow dwarf virus, 118, 1339, 2431b, 2809.
 — *euphorbiae* in relation to spread of lettuce mosaic virus, 3067.
 — — transmitting potato virus Y str., 2796.
 — *pisi* transmitting alfalfa mosaic and cucumber mosaic viruses, 1064; pea virus disease, 5n.
 **Macrosporium commune* on poplar and *Salix*, 3020.
Macrosteles transmitting oats and wheat virus disease, 3752.
 — *fascifrons*, ?mycoplasma in, 5c, 3728.
 — — transmitting aster yellows, 2024, 2387; oat blue dwarf virus, 2836.
 — *laevis* transmitting wheat (winter) mosaic virus, 1587.
 — *quadripunctulatus* transmitting aster yellows, 981.
 Magnesium against pome fruit bark disease, 2534.
 — deficiency in banana, 525; black pepper, 2956; coconut, 1448.
 —, effect on hop leaf curl virus, 1537g; on leaf spot of *Ficus elastica*, 2504.
 — chloride against grapevine stem atrophy, 532.
Mahonia bealei, *Cylindrocladium* on, USA, pathogenicity and symptoms, 3084g.
 **Maize* (*Zea mays*), *Alternaria*+*Blakeslea* on, Nigeria, causing leaf blotch, 327c.
 —, brome mosaic virus on, 1566; hosts, 2380.

GENERAL INDEX

[Maize] cell death, microelements in relation to, 2847.
 —, *Cephalosporium acremonium* and *C. maydis* on, Egypt, study, 3243.
 —, *Cochliobolus carbonum* on, effect of toxin, 1629, 2450; factors affecting, 1630; peroxidase and polyphenol oxidase activity, 132; physiology, 3785.
 —, — *heterostrophus* on, assessing resistance, 2845; genetics, 463, 3786.
 —, — *sativus* on, *Streptomyces* antagonistic to, 741.
 *—, *Colletotrichum graminicola* on, Thailand, causing stalk rot, 2846.
 —, *Corticium solani* on, effect of herbicide, 2844.
 —, *Curvularia* on, Colombia, symptoms, 742.
 —, *Diplodia maydis* on, effect on stalk rot, 2463, 2464; genetics, 464, 1628.
 —, — *zeae* on, spore germination, 133.
 — diseases, USSR, 2054.
 *— dwarf mosaic virus on maize, USA (Ariz.), 2029; differential hosts, 3780; effect of atrazine, 125, 2451; of simazine, 1624; effect on susceptibility to *Gibberella fujikuroi*, 126; infectivity, 1625; pathological histology, 458; translocation, 79; var. react., 1624.
 — — — — on sorghum, 458.
 — — — — on sorghum×Sudan grass, 3250.
 — — — — on *Sorghum bicolor*, 1010.
 — — — — on *S. halepense*, 3250.
 — — — —, purification, 2051.
 — — — str. B, ?sugarcane mosaic virus str. E identical with, 2980.
 — — — — str. A & B on sorghum, 3788.
 —, *Endogone macrocarpa* var. *geospora* on, forming mycorrhiza, 936a.
 —, *Erwinia carotovora* on, India, resistance to streptomycin, 3787.
 —, — — f.sp. *zeae* on, UAR (Egypt), 3243.
 —, fungi in rhizosphere, USSR, 1961.
 —, fungi on *Diabrotica longicornis* associated with, 1357.
 —, — on stored, Guatemala, 2843.
 —, *Fusarium* on, effect of trichothecin, 134.
 —, — *culmorum* on, effect of phenolic compounds, 1631b.
 —, — *oxysporum* on, factors affecting, 1632.
 —, — *roseum* on, 1632; effect of nematodes, 1015.
 —, *Gibberella fujikuroi* on, Egypt, 3243; USSR, 2054; Yugoslavia, 1014; effect of maize dwarf mosaic virus, 126; of phenolic compounds, 1631b; of toxin from, 3784; evaluating reaction, 3246; factors affecting, 1014, 1632.
 —, — var. *subglutinans* on, Yugoslavia, 1014.
 —, — *roseum* on, causing stalk rot, 465.
 —, — *zeae* on, Yugoslavia, 1014; effect of phenolic compounds, 1631b; effect on stalk rot, 2464; factors affecting, 1014.
 —, *Helminthosporium leucostylum* on, USSR, 2054.
 —, *Kabatiella zeae* on, USA, symptoms, 5e.
 —, *Khuskia oryzae* on, USSR, 2054; Yugoslavia, 1014; effect on, 2465; factors affecting, 1014; var. react., 2465.
 [Maize], *Macrophomina phaseoli* on, USSR, 2054; factors affecting, 1576.
 *—, *Marasmiellus inoderma* on, Egypt, causing root rot, hosts, 2466.
 —, *Melinis minutiflora* virus can infect, 2286h.
 — mosaic, Réunion, resembling maize mosaic virus, 917b.
 — — virus, micro-ecology and multiplication in insect vector, 412.
 — — — on maize, *Sorghum halepense* as reservoir of infection, transmission by vectors, 3238.
 —, *Penicillium* on, control, 3755; factors affecting, 2842 a, b.
 —, — *cyclopium*, *P. martensii*, *P. purpureogenum* var. *rubri-sclerotium* and *P. urticae* on, USSR, factors affecting, 2055.
 —, ?*Phyllachora maydis* on, causing tar spot, 743.
 —, *Phyllosticta* on, USA, control, factors affecting and overwintering, 3248; react. of inbreds, 3247, 3248.
 —, — *zeae* on, genetics, 135; study, 3083c.
 —, *Pseudomonas lapsa* on, India, resistance to streptomycin, 3787.
 —, *Puccinia graminis* on, 1351.
 —, — *polysora* on, Réunion, 917b; Zambia, 636b.
 —, — *sorghii* on, Canada, 3241; India, 2455; Réunion, 917b; USSR, 460, 2456; Zambia, 636; breeding against, 2455; control, 460, 3241; *Eudarluca caricis* parasitizing, 460; teliospore germination, 3781; ultrastructure of host and parasite, 1627; uredospore germination, 2053; var. react., 2456.
 —, *Pythium arrhenomanes* on, effect of herbicide, 2844.
 —, — *ultimum* on, effect of nematodes, 1015.
 — 'rayado fino' virus, C. America, transmission by vectors, 1349.
 — redness, Rumania, fungi in relation to, 2454; Yugoslavia, ?virus causing, 2453.
 — root rot, S. Africa, fungi causing, 3783b.
 — rough dwarf virus in *Laodelphax striatellus*, 457.
 — — — —, micro-ecology and multiplication in insect vector, 412.
 — — — — on maize, purification and serology, 1626; transmission by vectors, 1626, 2052.
 —, *Sclerospora* on, control, 3237c; factors affecting, 3237d; genetics of resistance, 3237a; transmission by seed, 3237d.
 —, — *philippinensis* on, factors affecting, losses and severity, 1359; symptoms, 693; var. react., 1359.
 —, — *sacchari* on, spore production and germination, 3237b.
 —, — *sorghii* on, pathological histology, 458.
 — seed treatment, effect on germination, 3249.
 —, *Sphacelia sorghi* on, susceptibility, 328a.
 —, *Sphacelotheca destruens* on, USSR, effect on yield, 2458.
 — stalk rot in Austria, 466; Egypt, 3243; S. Africa, 3783a; Thailand, 2846; *Colletotrichum graminicola* causing, 2846; effect of thinning, 1358; evaluating resistance,

2463; factors affecting, 3244, 3783a, b, c; cell death and susceptibility to, 2464; fungi associated with, 466, 3783a; *Gibberella roseum* causing, 465; study, 3243.

[Maize] storage disorders, control, 324j.

— streak virus on maize, Réunion, 917b; S. Africa, related to sugarcane streak virus, transmission by vectors, 2619.

— stunt in *USA (Ohio), 459; Venezuela, 1350; control, 1247a; electron microscopy, 739; ?mycoplasma causing, 739, 2385, 3083b, 3239, 3240, 3727; not transmitted by *Dalbulus maidis*, 459; transmission by vectors, 459, 1350; var. react., 1350.

— — str. on maize, symptoms and transmission by vectors, 5d.

— sugarcane mosaic virus on, 2049; Mauritius, 2452; USA, 919d; transmission by seed, 2452.

— — — Johnson grass str. on, resistance, 1011; ultrastructure, 2050.

— tar spot, ?*Phyllachora maydis* causing, 743.

—, *Trichometasphaeria turcica* on, USSR, 1356, 2054; control, 2461; effect of biotin, 2462; of phenolic compounds, 1631b; overwintering, 1356, 2459; physiologic races, 3789; resistance, 1631a, 2462, 3245; virulence, 2460.

—, *Trichothecium roseum* on, toxic metabolite, 1946.

—, *Ustilago maydis* on, Germany (W.), 1012; Sabah, 329f; Switzerland, 3242; USSR, 2841; Yugoslavia, 2457; control, 3242; development of galls, 3782; dynamics of development, 461, 1013; effect of herbicides, 462; of thiram and KBr, 1355; electrical resistance, 2841; epidemiology, 3242; factors affecting, 131, 2457; genetics of resistance, 740, 1352; inoculating, 129, 130; soil-borne, 3242; var. react., 1352, 1353.

—, wheat streak mosaic virus on, causing kernel red streak, 127a; effect on yield, 127b; synergism between *Aceria tulipae* and, 127a; var. react., 127b.

—, variegation disease on, 5h.

—, *Xanthomonas albilineans* on, Guyana, inoculating, 3560f.

—, *guizotiae* var. *indicus* can infect, 1108.

Makrolin against *Alternaria tenuissima* on *Capsicum*, 631.

Malachite green as seed treatment for onion, 614.

Malathion against vectors of cucumber mosaic virus, 3334.

Malaxodes farinosus transmitting *Melinis minutiflora* virus, 2286h.

Maleic hydrazide, effect on growth of fungi, 365.

Malipur, technique for testing, 2312.

— P against *Phytophthora infestans* on potato, 1120; tomato diseases, 1148.

Malus, Venturia inaequalis on, resistance, 1260i.

— *platycarpa*, apple scaly bark on, effect of temp., 2523l.

— *pumila*, see Apple.

Malva vein clearing virus on *Malva*, 2014.

Mancozeb against *Bipolaris iridis* on *Iris*, 909f; papaw rots, 1740a; *Plasmopara viticola*, 3418; *Podosphaera oxyacanthae* var. *tridactyla* on apricot, 1433; *Pseudopeziza ribis* on currant, 2307q; *P. tracheiphila* on grapevine, 3418; *Sclerotinia laxa* on apricot, 1433.

—, effect on *Alternaria brassicicola*, 3555c; *Septoria apiicola* on celery, 3555e.

— injury to *Euphorbia pulcherrima*, 1400.

Mandarin orange, see Orange.

Maneb against *Acroconidiella tropaeoli* on *Tropaeolum majus*, 1685; *Alternaria* on passion fruit, 806; banana diseases, 1100; *Cladosporium fulvum*, 2653; *Cronartium ribicola* on pine, 1802; damping-off of vegetables, 3188; *Erwinia amylovora* on fruit trees, 1427; *Gloeosporium foliicola* on citrus, 2073; *Helminthosporium papulosum* f.sp. *pyri* on pear, 3380; *Mycosphaerella brassicicola* on Brussels sprouts, 2218; *Peronospora tabacina*, 1138, 2643; *Phytophthora infestans* on potato, 826; *P. nicotianae* var. *parasitica* on citrus, 1376; *Pseudoperonospora cubensis* on cucumber, 2265; *Pseudopeziza ribis* on currant, 2307q; *Sphaerotheca pannosa* var. *persicae* on peach, 1090; as seed treatment for cotton, 3298a; oats, 2726a; potato, 1754c, 2607.

— causing N deficiency in sugarcane, 2984.

—, effect on *Phytophthora infestans*, 3446.

— toxicity to tobacco, 2643.

— Z against *Colletotrichum musae* and *Fusarium roseum* on banana, 2563.

Manganese as seed treatment for tomato, 1149.

— deficiency ?causing groundnut 'yellow dwarfing', 306b.

— in barley, oats and wheat, 3190.

—, effect on cellulose decomposition by fungi 366; on virus diseases of potato and tomato, 1305.

— toxicity in *Medicago*, 3365.

Mangifera indica, see Mango.

Mango (*Mangifera indica*), *Aspergillus niger* on, 527.

—, *Botryodiplodia theobromae* on, utilization of amino acids, 3639.

—, *Curvularia lunata* var. *aeria* on, effect of P sources, 3638.

—, *Diplodia cajani* can infect, 526.

—, *natalensis* on, control, 526, 2941; epidemiology, 526; factors affecting, 2756; pectinolytic enzyme activity, 807.

—, *rosarum* can infect, 526.

—, fungi on, India, 3559.

—, *Oidium mangiferae* on, control, 1417.

—, *Rhizopus arrhizus* on, control, 3379.

Manihot utilissima, see Cassava.

Manila Hemp, see *Musa textilis*.

Manure, *Corticium rolfsii* in, survival of sclerotia, 1967.

Manzate against *Cladosporium fulvum*, 2653; *Colletotrichum* and *Glomerella cingulata* on papaw, 1740a.

— D against *Alternaria solani* on potato, 2604.

Maple, see *Acer*.

Marantia arundinacea, see Arrowroot.

Marasmiellus cocophilus on coconut, 1110.

*— *inoderma* on maize and sugarcane, 2466.

GENERAL INDEX

Marasmius androsaceus on rose, 1870f.
 — *equicrinis* on cacao, 3562a.
 — *perniciosus*, CMI description, 2338.
 — *scandens* on cacao, 3562a.
 Marcin against *Peronospora tabacina*, 250.
 Market garden crops diseases, France, 1.
 — — — virus diseases, 910e.
 Marrow, see Vegetable marrow.
Marssonina brunnea, *Drepanopeziza punctiformis* perfect state, 2668.
 — — on poplar, see Poplar.
 — *castagnaei* on aspen and poplar, 268.
 — *populi* on poplar, 1870h.
 — *salicicola* on *Salix*, 2189f.
 — — on *Salix alba*, 3490, 3491.
 — *tremulae* on aspen, 268.
Massariella pruni on *Prunus divaricata*, 2104.
Mastigosporium album on hay and wheat, 1870a, b.
 — *deschampsiae*, effect of UV light on sporulation, 2282j.
 — *rubricosum* on cocksfoot, 635e.
 MC 25 against *Fusarium oxysporum* f.sp. *lycopersici*, 2183.
Medicago, manganese toxicity, 3365.
 — *hispida*, pea virus disease on, 5n.
 — *sativa*, see Lucerne.
Megoura viciae transmitting pea enation mosaic virus, 601, 1199.
Melampsora lini, effect of temp. on growth, 2493.
 — — on flax, see Flax.
 — *populnea* on aspen, 2202.
 — — on pine, 3035.
Melampsorella caryophyllacearum on *Abies balsamea*, 577.
Melampsoridium betulina on birch, 3133.
Melanconiales, India, 61; USSR, 58.
Melanconium betulinum on birch, 2726e.
Melilotus, clover wound tumour virus on, tumours in, 980.
 — *alba*, pea mosaic virus on, USSR, reservoir of infection, 1837.
 — —, soil fungi on, India, 3559.
 — *officinalis*, pea mosaic virus on, USSR, reservoir of infection, 1837.
 **Melinis minutiflora* stunting ?virus disease, Kenya, transmission, 1686.
 — — virus disease, hosts and transmission by vectors, 2286h.
Meloidogyne incognita acrita, effect on cotton diseases, 2874.
Melon (*Cucumis melo*), antibiotic from *Pseudomonas mycophaga* penetrating, 657.
 — *Colletotrichum lagenarium* on, citrullin content, 904; control, 2717; mode of infection, 2717.
 —, cucumber mosaic virus on, France, 1.
 — diseases, India, 87.
 —, ?*Erysiphe cichoracearum* on, Israel, 2718; control, 1524, 1531, 2718.
 —, Eyankey brown spot (die-back), Iran, 1242.
 —, *Fusarium* on, USSR, 905.
 —, — *oxysporum* f.sp. *melonis* on, France, 1; control, 314; factors affecting resistance, 3545.
 —, *Macrophomina phaseoli* on, control and factors affecting, 625.
 —, *Phytophthora drechsleri* on, Iran, 1530.
 *[Melon], *Pseudoperonospora cubensis* on, Nigeria, 328f.
 —, *Pythium butleri* on, 1862.
 — shot hole virus on melon, France, 1.
 —, ?*Sphaerotheca fuliginea* on, Israel, 2718.
 — vein necrosis virus on melon, USA, hosts, properties, and transmission by vectors, 2268.
 —, *Verticillium dahliae* on, 568.
 Melprex against *Albugo candida* on Indian mustard, 1823; *Venturia inaequalis*, 198.
 Menazon against vectors of carrot mottle + carrot red leaf viruses, 310.
Mentha viral proliferation, ?type of stolbur causing, 2008d.
 — *arvensis* diseases, 814.
 — — var. *piperascens*, antibacterial and antifungal activity of oil from, 2745.
 — *cardiaca* diseases, popular account, 2579.
 — *piperita*, see Peppermint.
 *— *spicata*, *Puccinia menthae* on, NSW, ?new race, 1103.
 Mercuran as seed treatment for beet, 2225; tobacco, 250; wheat, 1600.
 Mercuric acetamide against *Sclerotinia fructicola* on peach, 2922.
 — chloride as seed treatment for sesame, 2961; as soil treatment, 2413.
 — —, effect on *Cochliobolus sativus* on wheat straw, 2824; on *Sclerotium cepivorum* on onion, 3536.
 — — for isolating symbiotic fungi, 2746.
 Mercury compounds against fungi on grasses, 1691; *Fusarium oxysporum* f.sp. *narcissi* on *Narcissus*, 3343; *Sclerotinia fructicola* on peach, 2922; *Xanthomonas malvacearum*, 160; as seed treatment for barley, 2834; *Cicer arietinum*, 1520.
 —, effect on *Gloeosporium albo-rubrum* on *Hevea* rubber, 3460; on *Phytophthora palmivora* on black pepper and *Piper betle*, 1447; on *Pyrenophora avenae*, 2449, 2726a, 3235.
 — toxicity to iris, 2505.
 —, organic, against *Helminthosporium solani* on potato, 1123; *Plasmopara viticola*, 530; as seed treatment for barley, 1342; cereals, 3753; cotton, 3298a; oats, 2307o; rice, 1372.
 — —, —, effect on belladonna mottle virus, 2282h; on plant viruses, 3693.
 — —, —, ineffective against *Fusarium oxysporum* on tulip, 2893.
 Merfazin, see PMC.
 Mergamma C as seed treatment for barley, 1342.
 Mergon against *Ustilago hordei* on oats, 737.
 Merulius lacrymans, see *Serpula lacrimans*.
Metarrhizium anisopliae on *Oryctes monoceros*, 2305.
 — —, technique for isolating destruxins from, 1264.
 Metasystox, effect on infectivity of tobacco mosaic virus, 2986.
 Metham sodium, effect on tomato root rot, 909b.
 Methionine, effect on *Fusarium oxysporum* f.sp. *lycopersici*, 941.
 — utilization by *Corynebacterium sepedonicum*, 2285k.

GENERAL INDEX

6-Methoxy-benzoxazolinone associated with resistance of maize to *Trichometasphaeria turcica*, 3245.

Methylarsinsulphide as soil treatment, 1167.

β -methylaspartic acid, effect on *Aphanomyces euteiches* on pea, 3515.

Methyl-2-benzimidazole-carbamate produced by benomyl-treated cotton, 1042.

2-methylbenzoic acid anilide against basidiomycetes, 2727*m*.

Methyl bromide against maize nematodes, 1632; *Verticillium dahliae* on *Euphorbia pulcherrima*, 3335; as soil treatment, 245, 479, 1178, 1971, 2266, 2282*k*, 2413, 2655, 2727*l*, *o*, 2933, 3338.

—, effect on *Armillaria mellea*, 3661; fungi, 2727*l*.

— ineffective against *Thielaviopsis basicola* on tobacco, 2176.

Methylene blue as seed treatment for onion, 614.

—, effect on tobacco mosaic virus, 324*r*.

Methyl-ethyl-thiophos as seed treatment for onion, 614.

Methylisothiocyanate, fungitoxicity in soil, 3660.

Methylthiophanate, new systemic fungicide, 3602.

Methyrimol ineffective against *Sphaerotheca pannosa* on rose, 2891.

Mezineb against *Guignardia citricarpa* on orange, 2074.

Micide 55, effect on yield and quality of beet, 1828.

Microbiological methods, 2nd ed. of book on, 3146.

Microbiology, abstracts of methods in, Vol. 1, 2294.

—, advances in applied, Vol. 11, 3104.

—, industrial progress in, Vol. 7, 2293.

—, methods in, Vol. 1, 1887.

Micrococcus aurantiacus on rice, 3797.

Microcyclus ulei, CMI description, 2338.

— on *Hevea* rubber, see Rubber.

Micromycetes, Iran, 91.

Microsphaera alphitoides on oak, 3017.

— *diffusa* on bean, 1845.

— *grossulariae* on currant, 1731.

Miedzian 50 against *Cercospora beticola* on beet, 1831, 1832; *Phytophthora infestans* on potato, 1120.

Milcurl, new systemic fungicide, 3593*c*.

Milk against tobacco mosaic virus, 1490, 2285*h*.

Milstem against *Erysiphe graminis* on barley and wheat, 733.

—, new systemic fungicide, 3593*c*.

Mirabilis jalapa, *Phytophthora infestans* on, survival in soil, 3451.

Mites associated with black spot of pineapple, 3412.

— transmitting *Fomes annosus*, 875; *Prunus* latent virus, 2523*i*; *Pseudomonas marginata* on *Gladiolus*, 3339.

Mitula sclerotiorum parasitizing *Sclerotinia trifoliorum*, 506.

Molucella, *Myrothecium roridum* on, Kenya, newly imported, 637*b*.

Molybdenum deficiency in cauliflower, 3043; kohlrabi, 913.

—, effect on *Synchytrium endobioticum*, 1456; virus diseases of potato and tomato, 1305.

Monilia roreri, CMI description, 2338.

Moniliales, USSR, 58.

—, revision, 3676.

Moniliopsis aderholdii on cabbage, 884.

Monochaetia unicornis on *Cupressus lusitanica*, 1801.

Morestan against *Erysiphe cichoracearum* on cucumber, 1239; on Cucurbitaceae, 313; on vegetable marrow, 2271; *Leveillula taurica* on Solanaceae, 1321; on tomato, 1321, 1487; *Podosphaera leucotricha*, 1705; *Sphaerotheca fuliginea* on cantaloupe, 626; *S. pannosa* on peach, 2551; *Venturia inaequalis*, 1705.

Morsodren against *Fusarium oxysporum* f.sp. *gladioli*, 330*s*.

— ineffective against *Botryosphaeria corticis* on *Vaccinium corymbosum*, 2129.

Mortierella pusilla on mushroom, 1869.

Morus, see Mulberry.

Mountain pine beetle, see *Dendroctonus ponderosae*.

MS 1053 and MS 1143 against *Podosphaera leucotricha*, 789.

Mucor circinelloides on grain, 97.

— *mucedo* on *Ocneria dispar*, USSR, 346.

— *pusillus* on barley, stored, 1346, 1347, 2835*a*.

— *racemosus*, antagonism to tomato pathogens, 2180.

— *ramannianus* inhibited by soil streptomycetes, 374.

Mucorales, anaerobic growth, 359.

—, India, 1982.

Muellerites juniperi on *Juniperus nana*, 1164.

Mulberry (*Morus*), *Cerotellum fici* on, Singapore, 3134.

Musa nana, see Banana.

— *paradisiaca* var. *sapientum*, see Banana.

— *textilis*, *Corticium solani* on, Sabah, brown leaf mould provisionally attributed to imperfect state, 3562*h*.

—, *Deightoniella torulosa* on, Sabah, 1873*c*.

—, *Fusarium concolor* on, Sabah, black leaf blotch provisionally attributed to, 3562*h*.

—, *Pseudomonas solanacearum* on, Philippines, hosts and virulence, 3579.

Mushroom (*Agaricus*), bacterium on, 1867.

—, *Dactylium dendroides* on, Hungary, 1869.

— dieback virus, Netherlands, 1538*p*, 3554; UK, 3554; control, 1538*p*, 3554; effect on spore germination, 3076*a*; on yield, 3076*b*; particles, 1536; spread, 1538*p*, 3554.

—, *Diplocladium minus* on, Hungary, 1869.

— diseases, symptoms, 1868.

—, effect of herbicides, 2727*g*.

—, lysosome contents, 2291.

—, *Mortierella pusilla* on, Hungary, 1869.

—, *Mycogone perniciosa* on, control, 634; parasitism, 908*b*; physiology, 908*a*; spore dispersal and survival, 634.

—, *rosea* on, Hungary, 1869.

—, *Pseudomonas* on, 1867.

—, *aeruginosa* and *P. tolaasii* on, symptoms, 909*h*.

—, *Syzygites megalocarpus* on, Hungary, 1869.

GENERAL INDEX

[Mushroom], *Verticillium malthousei* on, control, 634; culturing, 909; spore dispersal and survival, 634.
 — virus disease, NSW, 1867.
 — diseases, 415, 9090.
 Muskmelon, see Melon.
 *Mustard, Chinese (*Brassica juncea*), *Corticium solani* on, *India, 1188; Sabah, 3562i.
 —, *Pythium debaryanum* can infect, 3061.
 —, Indian (*Brassica campestris* var. *sarson*), *Albugo candida* and *Peronospora parasitica* on, control, 1823.
Mycelium radicis on spruce, forming mycorrhiza, 3611.
 — — *atrovirens* ?on strawberry, 1095.
Mycena citricolor on *Anthocephalus cadamba*, 3010.
 — *polygramma* on trees and shrubs, 1156.
Mycoflora Australis, 2778.
 — of Azerbaijan, Vol. 4, *Peronosporales*, Russian book, 2783.
Mycogone perniciosa on mushroom, 634, 908a, b.
 — *rosea* on mushroom, 1869.
Mycoleptodiscus terrestris on *Lotus corniculatus*, 510.
 Mycological and bacteriological laboratory, guide for, Rumanian book, 2732.
 — colour chart, 3669.
 — studies honouring John N. Couch, book, 1885.
 Mycology, fundamentals of, book, 1254.
 —, hand-book of, I. *Phycomycetes* and *Ascomycetes* (Indian), 2nd ed., 2733.
 —, practical manual for identification of fungi, 3rd ed., 1254.
Mycoplasma ?associated with alfalfa mosaic virus on pea, 5b; apple chat fruit disease, 2725g; apple proliferation, 3367; aster yellows, 5c, 981, 1314, 2386; blackberry stunt, 3557; Brazilian big bud of tomato, 2648; clover phyllody, 1315, 2388, 3178; cotton virescence, 764, 765; lavender wilt, 497; little leaf of cowpea, 2798; of eggplant and *Vinca rosea*, 317; maize stunt, 739, 3083b, 3239, 3240; *Opuntia tuna* witches' broom, 2498; orange greening, 2858; papaw bunchy top, 529; pear decline, 2914; *Phormium tenax* disease, 1667; plant diseases, 2382, 2383, 2384; potato witches' broom, 1760, 3481; rape green petal, 2215; rice 'padi-jantan', 3260; rice yellows, 1640, 1641; sandalwood spike, 866, 1798; stolbur C and SM, 1315; strawberry green petal, 2930; sugarcane white leaf, 548, 832, 3465; sweet potato witches' broom, 3565f; tomato stolbur, 564, 3480; wallflower virescence, 502; yellows diseases 497, 2385, 3727.
 Mycoplasma-like bodies in *Dalbulus elimitus*, 739, 3239, 3240; *D. maidis*, 739; *Euscelis plebejus*, 3178; *Macrosteles fascifrons*, 5c.
 Mycorrhiza, distribution in plants, 23, 357.
 — of alder, 260a; *Carya pallida*, 1556; *Coniferae*, 24, 3611; *Corylus avellana*, 3615, 3616; *C. colurna*, 3616; *Cotinus coggygria*, 3617; *Dactylorhiza purpurella*, 3618; *Dendrobium cunninghamii*, 2750; *Liriodendron tulipifera*, 1556; *Nardus stricta*, 2749; *Neottia nidus-avis*, 935; pecan, 266; pine, see Pine; poplar, 3613; *Pseudotsuga menziesii*, see *P. menziesii*; *Rhus typhina*, 3617; *Spathoglottis plicata*, 3618; spruce, 3611; *Vanilla*, 1107; wheat, 2748.
 [Mycorrhiza], role in tree nutrition and timber production, 932.
 —, terminology, 21.
 —, uptake of P-32 by vesicular-arbuscular, 26.
Mycosphaerella arachidicola, see *M. arachidis*.
 — *arachidis* on groundnut, see Groundnut.
 — *argentinensis* on groundnut, 1228.
 — *berkeleyi*, growth and sporulation, 38.
 — — on groundnut, see Groundnut.
 — *brassicicola* on Brussels sprouts, 2218.
 — *citrullina* and *M. cucumis*, see *M. melonis*.
 — *fijiensis* on banana, see Banana.
 *— *fragariae* on strawberry, see Strawberry.
 *— *ligulicola* on *Chrysanthemum*, 3558a.
 — — self-inhibition of germination of pycnidiospores, 171.
 — *linorum* on flax, 3316.
 — *macrospora* on *Iris*, 175.
 — *melonis*, CMI map, 84.
 — — on vegetable marrow, 1241.
 — — — sporulation, 2272.
 — *minima* and *M. musae* on banana, 521.
 — *musicola* on banana, see Banana.
 *— *pinodes*, Ethiopia, 3739.
 — — on pea, 294.
 — *pyri*, proposed new comb. for *M. sentina* on pear, 3133.
 — *ribis* on currant, 1092.
 — — on gooseberry, 3394.
 — *sentina* on pear, 3133.
 — *tassiana* on date palm, 1449.
Mycotypha microspora, lysosome contents, 2291.
 — —, *Piptocephalis virginiana* on, haustorium-host interaction, 9.
Mycovellosiella pueraria on *Pueraria lobata*, 2901.
Myristica fragrans, see Nutmeg.
Myrobalan, see *Prunus cerasifera* var. *divaricata*.
Myrothecium commune in rhizosphere of barley, 1962.
 — *roridum*, CMI map, 84.
 — — on clover, 503, 2519.
 — — — on cotton, 1661, 2077.
 — — — on *Molucella*, 637b.
 — — — on soybean seed, 3055.
 — *ucrainicum* in rhizosphere of oats, 1962.
 — *verrucaria* ascorbic acid oxidase, 3650.
 — — on clover, 503.
Mytilidion gemmigenum on larch, 868.
Mycomycetes, book on, 1294, 3145.
Myxosporium devastans on birch, 573.
Myzus persicae not transmitting strawberry latent ringspot virus, 1158; tobacco rattle virus, 3321.
 — — transmitting alfalfa mosaic virus, 1064; bean yellow mosaic virus, 1062; beet mosaic virus, 1189, 3699; beet western yellows virus, 1191; beet yellows virus, 1189, 3699; celery mosaic virus, 617; chrysanthemum mild mottle virus, 3331; cucumber mosaic virus, 1064, 3721; eggplant mosaic virus, 3073; 'Kwunting' virus

GENERAL INDEX

on Chinese cabbage, 1501; lettuce mosaic virus, 3067; melon vein necrosis virus, 2268; papaw mosaic and ringspot viruses, 1740b; parsnip mosaic virus, 1857; pea virus, 5n; plum pox virus, 3387; potato leaf roll virus, 233, 1755, 2157, 2591, 2968, 3444, 3699; potato virus Y, 3437; potato virus Y str., 2796; tobacco mosaic virus, 324s, 1477; *Wisteria* vein mosaic virus, 2013.

[*Myzus persicae*] uptake and transmission of stylet borne viruses, 3155.

Nabam as seed treatment for oats, 2726a. —, effect on phytopathogenic bacteria, 2303.

Naphthalene acetamide, effect on cork spot and mineral content of apple, 2539.

Naphthoselinone against *Agrobacterium tumefaciens* on grapevine, 1446.

Narcissus diseases, Spain, 1047.

—, *Fusarium oxysporum* f.sp. *narcissi* on, control, 3343.

— mosaic virus on *Narcissus*, Czechoslovakia, electron microscopy and hosts, 2889; USSR, 1391.

—, *Ramularia vallisumbrosae* on, control, 177.

*—, *Rosellinia necatrix* on, NZ, 3183.

—, *Stagonospora curtisii* on, types of infection, 909g.

— viruses, 3557f.

— white streak virus on *Narcissus*, 909p; USSR, 1391.

Nardus stricta, fungi on, forming mycorrhiza, 2749.

Nasturtium officinale, see Watercress.

Neantina as seed treatment for rice, 1372.

Nectria cinnabarinina, endogenous rhythms, 2328.

— on hornbeam, 573.

— on trees and shrubs, 1156.

— *coccinea* on *Ceanothus velutinus*, 1677.

— *cucurbitula* on spruce, 585.

— *fuckeliana*, hosts, 1496.

— *galligena*, biochemical changes during growth, 1941.

— on *Acer saccharum*, 2661.

— on apple, see Apple.

— on pome fruit, 1707.

—, producing growth substances, 39.

— *radicicola* in rhizosphere of bean, 3520.

— on lily, 2888.

— on *Pseudotsuga menziesii*, 1178.

*— on *Rhododendron*, 168.

Nectriella versoniana on pomegranate, 3405.

Nemagon 90 against *Pythium* in soil, 3659.

Nematodes associated with *Ophiobolus graminis* on barley, 2307n.

— in relation to *Fusarium oxysporum* on *Pseudotsuga menziesii*, 1178.

— transmitting apple brown ringspot virus complex and apple chlorotic leaf spot virus, 2522h; ?brome mosaic virus, 1566; ?*Fomes annosus*, 875; *Fusarium oxysporum*, *F. roseum* and *Gibberella fujikuroi*, 1632; virus associated with peach willow leaf rosette, 2522s; virus diseases of fruit, 785, 2523h.

Neofabrea malicorticis distinct from *N. populi*, 1797.

— *populi* on aspen, 1797.

Neomycin, effect on *Fusarium roseum* f.sp. *cerealis* Culmorum in soil, 3666; potato virus X on *Gomphrena globosa*, 1756.

Neottia nidus-avis, *Rhizoctonia* on, forming mycorrhiza, fine structure, 935.

Neovossia indica on wheat, 3193.

Nephrotettix apicalis transmitting rice yellow dwarf virus, 1637.

— *cincticeps* transmitting rice dwarf disease, 1635, 1636; rice yellow dwarf virus, 1637.

— *impicticeps* transmitting rice penyakit merah virus, 1364, 3261; rice tungro virus, 2472, 2851, 3259; rice virus disease, 1639; rice yellow dwarf virus, 1637, 3259.

NEPO viruses, electron microscopy, 3153.

— on *Nicotiana rustica*, 3555p.

**Nerine bowdenii*, *Gibberella fujikuroi* var. *subglutinans* on, Denmark, 322.

Nesophrosyne orientalis transmitting groundnut, Leguminosae, and soybean witches' broom viruses, 1865.

— *ryukyuensis* transmitting sweet potato witches' broom virus, 1865.

Neurospora crassa, effect of quintozone on cell wall, 19.

Nickel, effect on resistance of potato to diseases, 2967.

Nicotiana, *Peronospora tabacina* on, physiologic specialization, 558b.

—, *Thielaviopsis basicola* on, method for studying, 848, 3478.

—, tobacco and tomato mosaic viruses on, symptoms, 1769.

— *alata*, tomato spotted wilt virus on, resistance and transmission by vectors, 1480.

— *clevelandii* as antigen plant for *Chrysanthemum* virus B, 2882.

— as indicator for plum pox virus, 2920.

—, eggplant mosaic virus on, accumulation, 978.

—, grapevine fanleaf virus on, electron microscopy, 808.

—, pea enation mosaic virus can infect, 292.

—, plum pox virus can infect, 2547.

—, —, — on, hosts and properties, 2282f.

—, potato (Andean) mosaic virus on, accumulation, 978.

—, tobacco mosaic virus can infect, 3565b.

—, — rattle virus on, replication, 2374; X body formation, 3169.

— *XN. glutinosa* as host for virus diseases, 1313.

— *debneyi*, *Peronospora tabacina* can infect, 2641.

—, *Thielaviopsis basicola* on, resistance, 1139, 1483.

— *glaucia*, tomato spotted wilt virus on, resistance and transmission by vectors, 1480.

— *glutinosa*, bean mosaic virus on, 910i.

—, beet curly top virus str. on, differentiation, 3512.

—, *Belladonna* mottle virus on, properties, 707.

—, *Chrysanthemum* mild mottle virus can infect, 3331.

—, cucumber mosaic virus str. Y on, chlorophyll content and CO₂ fixation, 3168.

GENERAL INDEX

[*Nicotiana glutinosa*, cucumber mosaic virus] str. can infect, 1478.

— —, lucerne virus on, ultrastructure, 1410.

— —, potato virus X on, electron microscopy, 3167; factors affecting infectivity, 3696.

— —, *Thielaviopsis basicola* on, inhibiting tobacco mosaic virus, 399.

— —, tobacco mosaic virus on, changes in protein constitution, 3705; effect of azauracil, 840; of chloramphenicol, 3158; of citrinin, 556, 2987; of growth regulators, 1772; of inhibitors, 2986; ethylene production, 3159; factors affecting RNA infectivity, 3706; inhibition, 2020; by *Pseudomonas* and other soil bacteria, 2019; by proteinaceous inhibitors, 1312; by homeopathic and pharmacopeial drugs, 1773.

— —, — necrosis virus on, inhibition, 2020.

— — *XN. clevelandii* as host for virus diseases, 1313.

— *goodspeedii* \times tobacco, *Peronospora tabacina* on, resistance, 1482.

— *longiflora*, tobacco mosaic virus on, Argentina, 844.

— *megalocephalon*, alternate host for poplar mosaic virus, 2189i.

— —, plum pox virus can infect, 2547.

— —, raspberry ringspot virus on, producing X bodies, 3718.

— *noctiflora*, tomato spotted wilt virus on, resistance and transmission by vectors, 1480.

— *quadrivalvis*, plum virus can infect, 2545.

— *rustica*, *Arabis* mosaic virus on, inactivation, 76.

— —, aster yellows on, mycoplasma-like bodies in, 5c.

— —, cherry leaf roll virus on, inactivation, 76, 3555o; producing virus free plants, 3555o; tubular inclusion bodies in, 3153, 3555p.

— —, *Cochliobolus spicifer* on, India, 1568a.

— —, cucumber mosaic virus on, 3555o.

— —, NEPO viruses on, tubules induced by, 3555p.

— —, rape green petal disease can infect, 3041.

— —, *Thielaviopsis basicola* on, resistance, 1139.

— —, *sylvestris*, tobacco mosaic virus str. can infect, 2637.

— *tabacum*, see Tobacco.

— Xanthi, tobacco mosaic virus on, electron microscopy, 836, 837; hypersensitivity, 834; local lesion formation, 3707; producing phenolic compounds, 839; protein synthesis, 835.

Nigrospora musae on banana, 2728k.

— *oryzae*, trace elements for growth, 952.

— *sphaerica* on banana, 803.

Nilaparvata lugens transmitting rice grassy stunt virus, 3793.

Nitrafen against *Fusarium oxysporum* f.sp. *vasinfectum* on cotton, 155; *Gnomonia erythrostoma* on apricot, 3392; *Mycosphaerella ribis* on gooseberry, 3394; *Verticillium dahliae* on cotton, 155.

Nitrogen deficiency in lucerne, 2898; sugar-cane, 2984; tangor (citrus), 330b.

[Nitrogen], effect on *Agrobacterium tumefaciens* on grapevine, 2572; beet western yellows+beet yellows viruses on beet, 1506; *Cochliobolus miyabeanus*, 2475; *Phytophthora infestans*, 3450; *Puccinia graminis* on cocksfoot, 1688; *Pyricularia oryzae*, 3795; on grapevine, 2572; *Stereum purpureum* on fruit trees, 2527; tobacco necrosis virus on bean, 1515; *Xanthomonas* on *Philodendron oxycardium*, 2510.

— excess ?causing rice straighthead, 2728a. o-nitrophenol as seed treatment for onion, 614.

Northern cereal mosaic virus in *Laodelphax striatellus*, 722.

Novozir N50 toxicity to potato, 1458.

*Oak (*Quercus*), *Ceratocystis fagacearum* on, USA (S. Carol.), 1795.

—, *Clitocybe tabescens* on, USA, causing dieback, 864.

—, *Gloeosporium quercinum* on, USSR, 264.

—, *Microsphaera alphitoides* on, Germany, factors affecting, 3017.

— mycorrhiza, beaded endotrophic, 25.

*—, *Phytophthora cinnamomi* on, Argentina, 2658.

—, sensitivity to ozone, 857.

*Oats (*Avena* spp.), aster yellows on, ?Sweden, 3752; symptoms, 454.

—, barley virus A can infect, 3776.

—, barley yellow dwarf virus on, 1339; Canada, 118; diagnosing, 74; transmission by vectors, 118.

—, — — — MAV and RPV str. on, transmission by vector, 2432.

*— blue dwarf virus on oats, ?Sweden, 3752; transmission by vectors, 2836; var. react., 119.

—, brome mosaic virus on, 1566.

—, *Cercosporaella herpotrichoides* on, in crop rotation, 2282j.

—, cereal bullet-shaped virus on, transmission by vectors, 1581.

—, *Cochliobolus victoriae* on, effect of toxin on resistant and susceptible plants, 1622, 1629, 2450; of victorin, 1009, 1623, 2840; fate of victorin in coleoptiles, 122; genetics, 1348; sensitivity of mutants to victorin, 1348.

— diseases, Denmark, 914; NSW, 986; resistance, 2443.

—, *Erysiphe graminis* on, Belgium, 738; var. react., 738, 3078a.

— foot rot, effect of seed treatment, 2307o.

— frost injury, NSW, 986.

—, fungi in rhizosphere, USSR, 1961.

—, iron deficiency, 913.

—, *Leptosphaeria avenaria* on, effect of CO₂, 2411.

—, manganese deficiency, var. react., 3190.

— mosaic virus on oats, UK, particles and transmission, 3230.

—, *Myrothecium ucrainicum* in rhizosphere, 1962.

—, *Ophiobolus graminis* on, enzyme production, 3758a, b.

—, ?*Physoderma* can infect, 2442.

GENERAL INDEX

[Oats], *Puccinia* on, var. react., 3078a.
 —, — *coronata* on, 456; Canada, 3189; Czechoslovakia, 3232, 3233; England, 2405; Israel, 2048, 3234; USA, 3231; USSR, 2811; asexual variation in virulence, 455; effect of ozone, 2447; germination and longevity of teliospores, 3231; physiologic races, 2811, 3232, 3233; resistance, 2047, 2837, 3233, 3234; specialization, 2838; transmission by birds, 3571; var. react., 2048, 3232, 3233.
 —, — *graminis* on, Canada, 3189; Czechoslovakia, 2839; Kenya, 2406; USA, 2416; USSR, 2033, 2811; epidemiology, 2406; factors affecting in mixed plantings, 2444; physiologic races, 2406, 2416, 2811; resistance, 2839; selectivity in heterogeneous populations, 2445; somatic segregation, 119; specialized form, 2033.
 —, *Pyrenophora avenae* on, England and Netherlands, 3235; N. Ireland, 2726a; Wales, 3235; control, 2726a; mercury resistance, 2449, 2726a, 3235; transmission by birds, 3571.
 —, *Sclerospora philippinensis* on, 1360.
 — seed diseases, control and factors affecting germination, 3755.
 — sterile dwarf virus on oats, Norway, 424; *UK, 3229; control, 3779; hosts, 3229; transmission by vectors, 3229, 3779.
 —, *Ustilago hordei* on, control, 737.
Ocimum basilicum, alfalfa mosaic virus on, leaf infection, 3716.
Ocneria dispar, fungi on, USSR, 346.
Odontoglossum ringspot virus on orchid, 778, 3344.
Oidium abelmoschi, *Cinnabolus compositarum* on, Yugoslavia, 3572.
 — *begoniae* on *Begonia*, 2085, 3322.
 — *caricae* and *O. caricae-papayae* on papaw, 1740a.
 — *chrysanthemi* on *Chrysanthemum*, 2310.
 — *euonymi-japonica* on *Euonymus japonicus*, 1397.
 *— *heveae* on *Hevea* rubber, see Rubber.
 — *indicum* on papaw, 1740a.
 — *mangiferae* on mango, 1417.
 *— *piperis* on *Piper betle*, 3425.
 Oil against cucumber mosaic virus on *Capsicum*, 2274; *Curvularia lycopersici* and *Mycosphaerella fijiensis* on banana, 3402; *Phoma destructiva* on tomato, 1488; *Phytophthora* on *Hevea* rubber, 831; *Sclerotinia fructicola* on peach, 2922; potato virus Y on *Capsicum*, 2274.
 —, effect on *Cordana musae* on banana, 3402; *Mycosphaerella musicola*, 2400.
 —, use on tobacco, injury, 1138.
 —, mineral, against *Chrysanthemum* virus B on *Chrysanthemum*, 1538r.
 —, —, ineffective against *Mycosphaerella musicola*, 3400.
 Oil Palm (*Elaeis guineensis*) blast disease, breeding against, 1111; study, 2154b.
 —, boron deficiency in, control, 820.
 —, —, *Botryodiplodia* on, Thailand, 1753.
 —, —, bud rot, Sabah, 3562f.
 —, —, *Ceratocystis paradoxa* on, Sabah, 1873a.
 [Oil Palm], *Cercospora elaeidis* on, Congo, 3433; *Ghana, 2581; Nigeria, 2154a; breeding against, 3433; control, 2154a, 2581; fungicides ineffective against, 3433; morphology and symptoms, 2581.
 —, —, *Curvularia* on, Thailand, 1753.
 —, —, *eragrostidis* on, Sabah, 3562g.
 —, —, diseases, Ghana, 88; Thailand, 1753.
 —, fungi on seed, 1873.
 —, —, *Fusarium oxysporum* f.sp. *elaeidis* on, control, 3432.
 —, —, *Ganoderma* and *G. miniatoocinctum* on, Malaya, taxonomy, 3561b.
 —, —, *Glomerella cingulata* on, Sabah, 3562g.
 —, —, *Pestalotiopsis* on, Thailand, 1753.
 —, —, *Phaeotrichoconis crotalariae* on, Sabah, 329d, 1873a.
 —, —, *Pythium* on, breeding against, 1111; isolation, 2154b.
 —, —, *Rhizoctonia lamellifera* on, Sabah, 1173a, 3562g; breeding against, 1111.
 —, —, ringspot chlorosis, Sabah, 3562g.
 —, —, spear rot, Thailand, *Fusarium* associated with, 1753.
 —, seed crops diseases, India, 3741.
Olea europaea, see Olive.
Oliarius atkinsoni transmitting *Phormium* yellow leaf disease, 1667.
*Olive (*Olea europaea*), *Agrobacterium tumefaciens* on, Egypt, 344.
 —, *Cycloconium oleaginum* on, Morocco, study, 1441; biology and control, 3413.
 —, *Glomerella cingulata* on, *Gloeosporium olivarum* f.sp. of, 1744.
 —, *Pseudomonas savastanoi* on, Spain, 1442.
 —, *Verticillium dahliae* on, Cyprus, 911.
Olpidium associated with strawberry virus disease, 1732.
 —, transmitting viruses, 415.
 —, *brassicae*, apparatus for culturing, 324i.
 —, —, not transmitting cucumber necrosis virus, 324x.
 —, —, on lettuce, 3702; associated with lettuce big vein virus, 3182a.
 —, —, transmitting cucumber necrosis virus, 1307; tobacco necrosis virus, 1307, 1308, 3702.
 —, *cucurbitacearum* not transmitting tobacco necrosis virus, 324x.
 —, —, transmitting cucumber necrosis virus, 324x.
 Onion (*Allium cepa*), *Botrytis allii* on, Netherlands, 1538e; control, 1549; effect of artificial curing, 902.
 —, *Corticium rolfsii* on, effect of fungicides, 2727n.
 —, *Endogone* on, growth response to, in soil, 1273.
 —, *Peronospora destructor* on, Germany (E.), 2284; Poland, 611; forecasting, 611, 2285e.
 —, *Pyrenopeziza terrestris* on, control, 612; ultrastructure of roots, 1230; var. and spec. react., 612.
 —, *Sclerotinia squamosa* on, effect of fungicides, 1524; forecasting, 2285e.
 *—, *Sclerotium cepivorum* on, *Finland, 2031; Netherlands, 1538e; effect of fungicides, 3536; inhibition by *Penicillium nigricans*, 308b; by soil micro-organisms, 308a.

GENERAL INDEX

[Onion], *Urocystis cepulae* on, 3064; control, 614, 3064; factors affecting, 3064; growth in culture, 613.

Oospora pustulans on potato, see Potato.

Phytophthora graminis, behaviour of inoculum, 635f.

—, estimating soil-borne inoculum, 2307m.

— in rhizosphere of wheat, 3077b.

— in soil, 51, 1333, 3077b.

— on barley, see Barley.

— on cereals, 1585, 2307j, 3191.

— on grasses, 1585.

— on oats, 3758a, b.

— on wheat, see Wheat.

— var. *avenae* on *Lolium*, 635d.

Opuntia tuna witches' broom, ?mycoplasma causing, 2498.

Orange (*Citrus aurantium*, *C. nobilis*, *C. sinensis*, etc.), *Alternaria alternata* on, effect of inorganic chemicals, 481.

—, *citri* on, control, 1549.

*—, *Aspergillus niger* and *Botryodiplodia theobromae* on, India, 1650.

—, citrus cachexia virus on, Chile, 2480.

—, exocortis virus on, USA, producing dwarf trees, 330e.

—, greening virus on, mycoplasma-type structures in leaves, 2858.

—, impietratura virus on, Israel, indexing, 3799.

—, psorosis virus on, USSR, 2859.

—, ringspot virus on, *Iran, 2860; Italy, 146; symptoms and transmission by grafting, 2860.

—, stubborn disease virus on, Italy, 145; abscission and ethylene production in, 2070; indicator for, 1877b.

—, tristeza virus on, Brazil, 1375; USA, 330d; transmission by vectors, 2481, 2856; var. react., 330d.

—, *Deuterophoma tracheiphila* on, control, 2482.

—, *Diplodia natalensis* on, 526.

—, effect of air pollution, 2484, 3801.

— 'finger marks', Italy, 147.

—, *Guignardia citricarpa* on, NSW, 2074.

—, micro-organisms, classification and identification, 482.

—, *Penicillium* on, control, 759.

—, *digitatum* on, control, 2861, 3283; effect of biphenyl and biphenyl vapour, 760; pectic enzymes associated with, 2072; of gamma radiation and heat, 149.

—, *italicum* on, control, 2861.

—, *Phytophthora citrophthora* on, Qd, 480.

—, *nicotianae* var. *parasitica* on, Fiji, 1877b; Qd, 480; USA, 330d; var. react., 330d.

—, *palmivora* on, control, 2483.

— 'pop corn', Italy, 147.

Orchid, *Cymbidium* mosaic virus on, Netherlands, hosts, 3344; detecting, 778.

—, *Odontoglossum* ringspot virus on, Netherlands, hosts, 3344; detecting, 778.

Organil 67 as seed treatment for cotton, 3298c.

Ornamentals, *Cercospora* on, Malaysia, study, 2805.

— disease, Czechoslovakia, resembling tobacco rattle virus, 2008b.

— diseases (USSR), key to, 1668.

—, *Erysiphe* on, Rumania, biology, 772.

[Ornamentals], fluoride injury to, 2402.

*—, fungi on, India, 2779.

—, *Microsphaera*, *Oidium*, *Phyllactinia* and *Sphaerotheca* on, Rumania, biology, 772.

— virus diseases, 910e.

Orosius argentatus transmitting papaw yellow crinkle virus, 1740b.

Orthocide against carrot diseases, 1527; *Macrophoma musarum* on banana, 1097; as seed treatment for cotton, 3298c.

— 50 against *Venturia pirina*, 796.

Orthodifolatan against *Cephaleuros parasiticus* and *Corticium invisum* on tea, 2628; *Plasmopara viticola*, 223.

Orthophaltan against carrot diseases, 1527; *Sclerotinia fuckeliana* on grapevine, 811.

Oryctes monoceros, *Metarrhizium anisopliae* on, factors affecting, 2305.

Oryza sativa, see Rice.

Ovulariopsis papayae on papaw, 1740a.

Ovulinia azaleae on *Rhododendron*, 1389.

OXathiins against *Exobasidium vexans*, 2170e.

—, degradation in soil, 324d.

—, effect on metabolism of basidiomycetes, 3102.

Oxydemetonmethyl against aphids on lettuce, 3067.

Oxygen, effect on growth of *Phytophthora cactorum* in soil, 2335.

Oxotetracycline hydrochloride against *Puccinia recondita* on wheat, 725.

Oxythioquinox against *Podosphaera leucotricha*, 513.

Ozone, effect on fungi, 360, 671; *Leguminosae*, 1061; *Puccinia coronata*, 2447.

— injury to *Acer saccharum*, 1159; crops, USA, 330i; *Pelargonium*, 3345; pine, 1177; potato, effect on susceptibility to *Botrytis cinerea*, 241.

—, sensitivity of trees to, 857.

P-3-502 against cotton wilt, 158.

Pachybasium antagonistic against *Fusarium oxysporum* f. *melonis* on melon, 314.

Paecilomyces fusisporus in soil, 3123.

—, not affecting seed germination, 48.

*— *lecythisii* and **P. maximus* on timber, 1818.

Palm (*Chamaerops*), *Pestalozzia palmarum* on, Yugoslavia, 3434.

Panaeolus sphinctrinus, antibacterial activity of mycelia, 3607b.

Panax quinquefolius, see Ginseng.

Panicum miliaceum, St. Augustine decline virus on, 1402.

—, *Sphacelotheca destruens* on, effect of formaldehyde, 750.

—, *Tolypocladium penicillariae* on, control, 1583.

—, *miliare*, *Ephelis* (?)*oryzae* on, India, 749.

*— *repens*, *Cercospora oryzae* on, India, 2477.

Panogen against *Ustilago hordei* on oats, 737; as seed treatment for beet, 291; maize, 3249; spinach, 291.

— 15 as seed treatment for beet, 1833.

— PX as seed treatment for barley, 452, 3225.

GENERAL INDEX

- Papaw (*Carica papaya*), *Asperisporium caricae* on, control, 1740a.
- bumpy top, Cuba, 528, 1740b; ?mycoplasma associated with, 529; transmission by vectors, 1740b.
- , *Colletotrichum* on, control, 1740a.
- , — *papayae* on, effect on sugar content, 3409.
- , *Corynespora cassiicola* on, Africa, Australia, Malaysia, Philippines, 1740a.
- 'cotorro mosaic' virus, Cuba, 1740b.
- dieback, Qd, ?virus causing, 1740b.
- diseases, 1740; Hawaii, effect of aerial spraying, 3410.
- distortion ringspot virus on papaw, 1740b; Dominican Repub., 219; Venezuela, 3408; abnormalities induced by, 2137; identification, 219; transmission by vectors, 3408.
- , *Erysiphe cichoracearum* on, control, 1417.
- faint mottle ringspot virus, 1740b.
- *—, *Fomes lignosus* on, Sabah, 329f.
- , *Gloeosporium papayae* on, effect on sugar content, 3409.
- , *Glomerella cingulata* on, control, 1740a.
- leaf curl disease, India, transmission by vectors, 1740b.
- , *Leveillula taurica* on, Australia, 1740a.
- mild mosaic virus, effect of papain, 1741.
- mosaic virus on papaw, 528; Cuba, 2008e; India and Puerto Rico, transmission, 1740b.
- , *Oidium caricae*, *O. caricae-papayae* and *O. indicum* on, control, 1740a.
- , *Ovulariopsis papayae* on, Africa, 1740a.
- , *Phytophthora* on, control, 1740a.
- , — *nicotianae* var. *parasitica* on, Hawaii, 1740a.
- , — *palmivora* on, Malaya, mode of infection, 3561c.
- , *Pythium* and *Rhizoctonia* on, control, 1740a.
- , *Rhizopus stolonifer* on, pathogenicity, 2939.
- ringspot virus, Hawaii, 1740b.
- , *Sphaerotheca humuli* on, Australia, 1740a.
- virus diseases, Kenya and Tanzania, electron microscopy, 2286i.
- yellow crinkle virus on papaw, Qd, transmission by dodder and vectors, 1740b.
- Paraffin wax, use of, on potato, 1761.
- Parquat, effect on *Rhizopus stolonifer*, 378.
- Parinol 4% EC against *Sphaerotheca fuliginea* on cantaloupe, 626.
- Parsley (*Petroselinum crispum*), *Corticium solani* on, Italy, 2256.
- , *Septoria petroselini* on, var. react., 2257.
- virus electron microscopy and purification, 533.
- viruses 1-4, UK, 3555i.
- western celery mosaic virus on, UK, *Conium maculatum* as source of infection, 3066.
- Parsnip (*Pastinaca sativa*), *Centrospora acerina* on, pathogenicity, stream water as source of inoculum, 1526.
- , *Itersonilia pastinacae* on, UK, 1233.
- mosaic virus on parsnip, UK, hosts, properties and transmission by vectors, 1857.
- **Paspalum scrobiculatum*, *Helminthosporium holmii* on, India, cultural characters and morphology, 2894.
- Passiflora* producing antifungal substance, 1907.
- *edulis*, see Passion fruit.
- Passion fruit (*Passiflora edulis*), *Alternaria* on Hawaii, 806.
- , *Fusarium oxysporum* f.sp. *passiflorae* on, Australia, non-occurrence in NZ, 2943.
- , *Gibberella pulicaris*, **Phytophthora cinnamomi* and **Thielaviopsis basicola* on, NZ, 2943.
- woodiness virus on passion fruit, Surinam, 3564a.
- , *Xanthomonas passiflorae* on, Brazil, 2139.
- Pastinaca sativa*, see Parsnip.
- Paulinia cupana* var. *sorbilis*, *Cephaeluros mycoidea* and *Colletotrichum guanicola* on, Brazil, 228.
- Paulownia tomentosa* as indicator for plant virus diseases, 2368.
- Paxillus panuoides* on timber, 1181.
- PCNB, see Quintozene.
- Pea (*Pisum sativum*), actinomycetes on, effect of soil amendments, 1839.
- , *Agrobacterium tumefaciens* on, 898.
- , alfalfa mosaic virus on, ?mycoplasma associated with, transmission mechanically, 5b.
- , *Aphanomyces euteiches* on, 602; USSR, 894; effect of β -methylaspartic acid, 3515; of soil treatment, 293; factors affecting, 1202; morphology and symptoms, 894.
- , *Ascochyta pinodella* on, USSR, 1201.
- , — *pisi* on, Netherlands, 1538w; control, 3555f; factors affecting, 896; lesion formation, 294; var. react., 1538w.
- , bacteria on, effect of soil amendments, 1839.
- , bean yellow mosaic virus on, 599b.
- , boron deficiency in, 1842.
- , ?*Botrytis cinerea* on, control, 3516.
- common mosaic virus, preservation of infectivity, 409.
- , *Corticium solani* on, effect of fungicides, 3048.
- , *Corynebacterium fascians* on, 897.
- damping-off, 960, 3048.
- diseases, USSR, 92.
- early browning virus, interaction between components and purification, 893.
- — — on pea, properties, 2727q.
- enation mosaic virus, Belgium, properties and transmission by vectors, 1838.
- — —, micro-ecology and multiplication in insect vector, 412.
- — — on broad bean, see Bean, broad.
- — — on lucerne, 411.
- — — on pea, Czechoslovakia, hosts, properties and transmission, 292; use of aphids to separate str., 1198.
- — —, preservation of infectivity, 409.
- , *Erysiphe* on, control, 2308e.
- , — *polygoni* on, Zambia, cleistocarp formation, 1513; genetics 1200; var. react., 1514.

GENERAL INDEX

[Pea] fizzletop virus on pea, USA, electron microscopy, 5m; symptoms and transmission by seed, 3047.

—, formation of pisatin induced by ethylene, 1841.

—, *Fusarium* on, effect of soil amendments, 1839; factors affecting, 1202.

—, — *oxysporum* on, control, 3516.

—, — f.sp. *pisi* on, classification, 1538w.

—, — *solanii* f.sp. *pisi* on, 602; effect of soil fumigants, 895.

— hollow heart, factors affecting, 295.

— leaf roll mosaic virus on pea, Netherlands, 2012.

— — — virus on *Cicer arietinum*, 1519.

— — — on soybean, 2237.

— mosaic virus, USSR, reservoirs of infection, 1837.

— — —, inhibition, 711.

— — — not transmitted by *Acyrthosiphon pisum* to lucerne, 1062.

— — — on bean, 599b, 3556g.

— — — on clover, 2897.

— — — on Leguminosae, 3691.

— — — on pea, 599b; effect of paraffin oil on transmission by vectors, 600; electron microscopy, 599a; inhibited by antiviral fraction from bacteria, 410; method of extraction, 599a.

— — — type virus disease, USA, transmission, 598.

—, *Mycosphaerella pinodes* on, lesion formation, 294.

— necrosis virus, identification, 2008g.

— — — on pea, Netherlands, 2012.

—, *Penicillium expansum* on, producing phytoalexin, 1203.

—, *Phytophthora megasperma* on, 504.

—, potato S group virus on, Netherlands, 1538k.

*—, *Pseudomonas pisi* on, *Italy, 1840; NZ, 603; Rumania, control and lysis by phages, 2697.

—, *Pythium* on, effect of fungicides, 3048; of soil amendments, 1839.

—, — *ultimum* on, effect of soil fumigants, 895.

—, red clover mottle virus on, effect of temp., 416.

—, — — vein mosaic virus on, Spain, classification and distribution, 1836.

— streak virus on sweet pea, 1306.

—, *Thielaviopsis basicola* on, factors affecting, 1202.

— top yellows virus, NSW, 2728h.

— virus disease; seed-borne, hosts and vectors, 5n.

Peach (*Prunus persica*), apple chlorotic leaf spot virus on, 189, 1698.

— decline, control, 2027c.

*—, *Diplodia* on, Egypt, hosts, similar to *D. tubericola*, 2121.

— diseases, control, 650.

—, *Fusicoccum amygdali* on, control, 2923.

—, *Lamberella corni-marisi* can infect, 202.

*—, *Phytophthora cinnamomi* on, USA, 5j.

—, plum virus can infect, 2524.

—, *Prunus* necrotic ringspot virus on, transmission mechanically, 3383.

—, *Pseudomonas* on, France, 3390.

[Peach], *Pythium* on, 2027c.

—, — *irregulare* and *P. vexans* on, factors affecting, 3389.

— rosette virus complex on stone fruit, 2918.

—, *Sclerotinia fructicola* on, NSW, 2728j; S. Australia, 798; control, 798, 2728j, 2922; factors affecting, 798; latent infection and losses, 2728j; overwintering, 2922.

—, — *laxa* on, Chile, 1086; USSR, control, 3388; factors affecting, 1086, 3388.

—, *Sphaerotheca pannosa* on, control, 2551; cytological study on simultaneous infection with *Taphrina deformans*, 518.

—, — — var. *persicae* on, control, 1090, 1417.

*— stem pitting, *Greece, symptoms and transmission by grafting, 2120; ?virus causing, 1247f, 3565d.

—, strawberry latent ringspot virus on, detecting, 2523f.

—, *Taphrina deformans* on, control, 2552; cytological study on simultaneous infection with *Sphaerotheca pannosa*, 518; development, 719; effect on, 718; factors affecting culture, 797.

—, toxicity of captan and dodine, 2123.

—, *Valsa cincta* on, 324m.

—, — *leucostoma* on, USA, collecting, 1727; effect of stock on susceptibility, 1726; factors affecting, 1727.

—, — *persoonii* on, 324m.

—, *Venturia carpophila* on, USSR, 2122.

—, *Verticillium* on; USSR, transmission to cotton, 984.

— virus diseases, indicator for, 3385.

— western X disease virus, transmission by vectors, 2797.

— 'willow leaf rosette', Italy, soil-borne viruses associated with, transmission by vectors, 2522s.

— winter necrosis, effect of pesticides, 3391.

—, *Xanthomonas pruni* on, inhibition by bacteriophage, 1728.

— yellow bud mosaic virus on peach, USA, associated with stem pitting, 210.

— — — spot virus on peach, Czechoslovakia, 1428.

Pear (*Pyrus communis*), *Alternaria kiku-chiana* on, toxin from, 2916.

—, apple chlorotic leafspot virus on, 189; Netherlands, 1538o.

— bark necrosis and pear bark split viruses on pear, anatomy, 2523m.

—, boron deficiency in, symptoms, 516.

— canker, USSR, fungi associated with, 2541.

—, *Cercospora piricola* on, USSR, overwintering, 1083.

— decline, Germany (E.), 2522j; effect on, 2540; factors affecting, 2522j; ?mycoplasma causing, 2914; rootstocks in relation to, 2540; symptoms, 2522j; transmission by grafting, 2540; viruses causing, 2522j.

—, *Diplodia* can infect, 2121.

— diseases, USA, 1720; control, 650, 1547, 1719.

*—, *Erwinia amylovora* on, *Denmark, 3081; England, 792; Italy, 2542; USA, *207, 1720; *Advis. Leafl.*, 2116; control, 792; *Crataegus* as source of infection,

GENERAL INDEX

792; factors affecting, 207, 2118; factors affecting resistance, 1084, 2117, 2543; mode of infection, 3382; review, 1720; symptoms, 792, 2542, 3382; techniques for inoculating, 2118; var. react., 3382.

[Pear], *Fabrea maculata* and *Gloeodes pomigena* on, control, 1719.

—, *Helminthosporium papulosum* f.sp. *pyri* on, control, 3380.

—, *Lambertia corni-maris* can infect, 202.

— 'moria' disease, Italy, research, 2522i.

—, *Mycosphaerella sentina* on, *M. pyri* proposed new comb., perfect state of *Septoria pyricola*, 3133.

—, *Penicillium expansum* on stored, control, 3381.

—, *Physalospora obtusa* on, India, 795; control, 1719.

—, *Podosphaera leucotricha* on, USA, review, 1720.

—, ?*Pseudomonas* on, USSR, symptoms, 2529.

—, — *syringae* on, Italy, 1722; USA, review, 1720; oozing associated with, 1247e; survival, 1722, 1723.

— red mottle and pear ringspot viruses on pear, Rumania, 2524.

— storage disorders, control, 3381; description and identification, 1711.

—, streptomycin residues in, determining, 2917.

—, toxicity of fungicides, 2725j.

—, *Valsa cincta* on, USSR, 1089.

—, — *sordida* on, USSR, causing canker, 2541.

— vein yellows virus on pear, Rumania, 2524.

—, *Venturia pirina* on, France, 1422; Germany (E.), 2284, 2532; Rumania, 796; USA, 1720; control, 796, 1082, 1422, 1719, 2308v, 2915, 3593e; forecasting, 2532; growth and sporulation, 1718; review, 1720.

— virus diseases, Denmark, 1416.

Pecan (*Carya pecan*), *Agrobacterium tumefaciens* on, control, 267.

*—, *Cytospora* on, USA (Ariz.), 2029.

—, *Fuscladium effusum* on, spread, 265; utilizing carbohydrate, 3411.

*—, *Gnomonia caryae* var. *pecanae* on, USA (Ala.), 3018.

—, *Sclerotoderma bovista* on, forming mycorrhiza, in USA, 266.

**Pelargonium*, *Agrobacterium tumefaciens* on, Egypt, 344.

—, *Botrytis cinerea* on, effect of ozone injury, 3345.

— diseases, Spain, 1047.

— disorder, ?boron deficiency causing, 3083d.

— leaf curl virus on *Pelargonium*, nuclei of cells in relation to, 2508.

—, ozone injury, effect on susceptibility to *Botrytis cinerea*, 3345.

—, *Puccinia pelargonii-zonalis* on, *Denmark, 3081; *Egypt, 1569b; *Yugoslavia, control, 2509.

—, tomato ringspot virus on, Canada, detection and transmission, 1399.

— virus diseases, 909q.

—, *Xanthomonas pelargonii* on, 2282c.

*[*Pelargonium*] *graveolens*, *Verticillium albo-atrum* on, India, 1682.

— *hortorum* and *P. hybridum grandiflorum*, effect of extracts on infectivity of tobacco mosaic virus, 2986.

Penicillin against *Pseudomonas pisi* on pea, 2697.

—, effect on *Venturia inaequalis*, 3608.

— G, effect on *Xanthomonas oryzicola* on rice, 2854.

Penicillins, semi-synthetic, structure-activity relationships, 3104b.

Penicillium chrysogenum in soil, 2771.

— *corymbiferum* on flower bulbs, 2727v.

— *cyano-fulvum* virus, effect on interferon production, 83.

— *cyclopium*, effect of sorbic acid derivatives on, 1953.

— — on barley, stored, 2835a.

— — on grain, 97.

— — on maize, 2055.

— *decumbens* in soil, 2772.

— *digitatum* on citrus, 1025, 2739.

— — on grapefruit, 149.

— — on orange, see Orange.

— — producing hemicellulases, 2758.

— —, surface characteristics of conidia, 1997.

— *diversum*, endogenous rhythms, 2328.

— *egyptiacum*, effect of ozone on germination, 671.

— *expansum* on apple, see Apple.

— — on pea, 1203.

— — on pear, stored, 3381.

— —, technique for differential fluorescence of nuclear structures, 1005.

— *funiculosum* on groundnut, 1856, 3533.

— *glaucum* antibiotic, 355.

— *italicum* on orange, 2861.

— *janthinellum* in soil, 2772.

— *lanosum*, effect of storage on oxidizing activity, 1923.

— *luteum* in soil, 2772.

— *martensii* on maize, 2055.

— *meleagrinum* on groundnut, 3742.

— *nigricans* inhibiting *Sclerotium cepivorum* on onion, 308.

— *oxalicum* on *Dioscorea dumetorum*, 3552.

*— — on *Emblica officinalis*, 85a.

— — on yam, 3552.

— *piscarium* in rhizosphere of pine and in soil, 1971.

— *purpurogenum* var. *rubri-sclerotium* on maize, 2055.

— *roqueforti* on barley, stored, 2835a.

— *rubrum* on groundnut, 1856, 3533.

— *rugulosum* in soil, 2772.

— *spinulosum* on grain, 97.

— *stoloniferum*, antiviral activity of RNA and virus-like particles from, 3726a.

— — virus, particle types, 2381.

— — —, purifying, 3083a.

— *urticae* on maize, 2055.

Peniophora, *P. aurantiaca* and *P. cremea*, antibacterial activity of mycelia, 3607b.

— *gigantea*, antagonism against *Fomes annosus*, 2189a, 2679.

*— *luna* on deodar, 2671.

— *pseudo-pini* on pine, 1809.

GENERAL INDEX

Pennisetum ciliare, *Ustilago penniseti* var. *verruculosa* on, W. Mediterranean, 2342.
 — *clandestinum* yellows, NSW, 2728e.
 — *dichotomum*, *Ustilago penniseti* var. *verruculosa* on, W. Mediterranean, 2342.
 — *glaucum*, St. Augustine decline virus on, 1402.
 — *orientale* \times *P. typhoides*, *Sphacelia sorghi* on, 3252.
 — *purpureum*, sugarcane mosaic virus on, 547.
 — *typhoides*, *Aspergillus japonicus* and *A. niger* on, effect on *Puccinia penniseti*, 136.
 * — —, *Cercospora penniseti* on, India, 3256.
 — —, *Chaetomium globosum* on, effect on *Puccinia penniseti*, 136.
 — —, *Claviceps microcephala* on, factors affecting, 3791.
 — —, *Fusarium oxysporum* on, effect on *Puccinia penniseti*, 136.
 — —, *Macrophomina phaseoli* on, factors affecting, 1576.
 — —, *Puccinia penniseti* on, effect of phylloplane fungi, 136.
 — —, *Sclerospora graminicola* on, effect on indole-3-acetic acid content, 470; effect on N content and free amino acid composition, 137.
 — —, *Trichoderma koningii* on, effect on *Puccinia penniseti*, 136.

Pentachloroaniline, breakdown product of quintozone, 2742.

Pentachloronitrobenzene, see Quintozene.

Pentachlorophenol as timber preservative, 2692.

Pentachlorothioanisole, breakdown product of quintozone, 2742.

Pentalonia nigronervosa not transmitting Indian banana mosaic disease, 3399.

Peperomia, *Cercospora* on, USA, isolation and pathogenicity, 330n.

Pepper, black (*Piper nigrum*), *Fusarium solani* on, effect of grafting on yield, 227.
 — — — f.sp. *piperi* on, *Piper columbrinum* resistant rootstock, 2955.
 — —, magnesium deficiency in, Brazil, symptoms, 2956.

— —, *Phytophthora palmivora* on, Sarawak, control, 3563a; effect of grafting on yield, 227; lesion formation, 1447; *Piper colubrinum* resistant rootstock, 2955.

Peppermint (*Mentha piperita*) diseases, 814; popular account, 2579.

—, *Verticillium dahliae* on, effect of nematodes, 2150; factors affecting resistance, 3424.

Perecot as seed treatment for cotton, 761a.

Pereman against *Cercospora elaeidis* on oil palm, 2154a.

Perenox against *Glomerella cingulata* on coffee, 2863a, 3288.
 —, effect on *G. cingulata* on coffee, 1027.
 —, toxicity to coffee, 2863a.

Periconia aranata on sorghum, 1633.

Peridermium harknessii, CMI map, 84.
 — — on pine, 257d.
 — — *pini* on pine, 870, 871, 3036.

Permatox as timber preservative, 1814.

Perocin 75B against *Venturia pirina*, 1082.

Peronospora destructor on onion, 611, 2284, 2285e.
 — *effusa*, see *P. farinosa*.
 — *farinosa*, India, review, 1983.
 — — on beet, see Beet.
 — *halstedii*, culturing, 1984.
 — *humuli* on hops, 1537i.
 — *manshurica* on soybean, 1521, 2237, 2238.
 — *parasitica*, culturing, 1984.
 — —, India, review, 1983.
 — — on *Brassica*, 1821, 3555a.
 — — on cabbage, 2216.
 — — on Chinese cabbage, 1877b, 3502.
 — — on Indian mustard, 1823.
 — — on Japanese radish, 592.
 — — on kale, 1502.
 — — on kohlrabi, 1316, 2282d.
 — *ruminicis*, India, review, 1983.
 — *schachtii*, see *P. farinosa*.
 — *tabacina*, culturing, 1984.
 — — on *Nicotiana*, 558b.
 — — on *N. goodspeedii* \times tobacco, 1482.
 — — on tobacco, see Tobacco.
 — *trigonellae* and *P. viciae*, India, review, 1983.
 — *viticola* and Peronosporaceae, culturing, 1984.

Peronosporales, Azerbaijan, descriptions and keys to, Russian book, 2783.

—, keys for identification, Polish book, 2782.

Perotsin-85, effect on *Cladosporium fulvum* and *Pseudomonas tabaci*, 3605.

Persea americana, see Avocado pear.

Persimmon (*Diospyros kaki* and *D. virginiana*) mosaic virus, Brazil, symptoms and transmission mechanically, 2942.

Pestalotia macrotricha in soil, 680.
 — *pauciseta* on *Litchi chinensis*, 669.
 — *psidii* on guava, 1742.
 * — *rhododendri* on rhododendron, 3736.
 — *theae* on tea, 1133.

**Pestalotiopsis palmarum* on *Capsicum*, 2720.
 — *versicolor*, India, variations, 1991.
 — — on *Rubus ellipticus*, 3675.

Pestalozzia palmarum on palm, 3434.

Pestalozzia punicae on pomegranate, 2104.

Pesticide handbook, 'Entoma', 21st revised ed., 349.

Pesticides, recommended common names, 3595.

—, use and control of economic pests and diseases in Indonesia, book, 1319.

—, — of non-selective, 2027b.

Petunia asteroid mosaic virus in soil, 1308.

—, *Chrysanthemum* mild mottle virus can infect, 3331.
 — — virus B on, detecting, 774.
 — — citrus variegation virus on, effect on, 3175.

* —, *Corynebacterium fascians* on, Iran, 1320.
 — *hybrida*, citrus ringspot virus on, symptomless host, 1373.
 — —, raspberry ringspot virus on, producing X bodies, 3718.
 — —, tobacco ringspot virus on, India, 1683.

GENERAL INDEX

Pezicula alba, factors affecting spore germination, 3643.
 — — on apple, see Apple.
 — *corticola*, perfect state of *Cryptosporiopsis corticola*, 2112.
 — *malicorticis* on apple, see Apple.
 — *populi* on poplar, 2200.
 PH50-82 against *Venturia inaequalis* and *V. pirina*, 2308v.
Phaeocryptopus gaeumannii on *Pseudotsuga menziesii*, 854a.
Phaeocystostroma ambiguum on maize, 3783a, b, c.
Phaeoramularia maculicola on poplar, 3489.
Phaeosphaera oryzae on rice, 2058.
Phaeotrichoconis crotalariae on oil palm, 329d, 1873a.
Phakopsora phyllanthi on *Phyllanthus acidus*, 3562i.
 Phaltan against *Cercospora beticola*, 3508s; *Colletotrichum* on papaw, 1740a; *Fusarium* on cucumber, 627; *Glomerella cingulata* on papaw, 1740a; *Leptosphaeria coniothyrium* on rose, 3349; *Macrophoma musarum* on banana, 1097; *Phytophthora infestans* on potato, 826; *Podosphaera oxyacanthae* var. *tridactyla* on apricot, 1433; *Pythium* on cucumber, 627; *Sclerotinia fuckeliana* on grapevine, 811; *S. laxa* on apricot, 1433; storage disorders of apple, 2536; as seed treatment for lentil and pea, 3516.
 —, technique for testing, 2312.
 —, toxicity to banana, 1097.
 — 50 against *Phytophthora infestans* on potato, 1120; tomato diseases, 1148.
Phaseollin, isolation from *Corticium solani*-infected bean, 2232.
Phaseolus, apple chlorotic leaf spot virus on, new host, 1538o.
 —, *Pseudomonas phaseolicola* on, factors affecting survival, 3555h.
 *— *atropurpureus*, *Helicobasidium purpureum* on, Qd, symptoms, 2899.
 *— *aureus*, *Alternaria alternata* on, India, 3527.
 — —, *Corticium solani* on, Iran, 2704; inoculum potential, losses and var. react., 2704; physiology of parasitism, 2236.
 — —, *Pythium deliense* on, India, 86.
 — diseases, Ghana, 88.
 — *lunatus*, *Erysiphe polygoni* on, control, 1269.
 — —, fungitoxic aldehydes in leaf wound sap, 2235.
 — —, *Phytophthora phaseoli* on, USA, resistance, 3565g.
 — — virus disease, USA, 1247j.
 — *mungo*, *Corticium solani* on, control, 3600.
 *— —, *Macrophomina phaseoli* on, India, 2705.
 — —, *Pythium debaryanum* can infect, 3061.
 — *vulgaris*, see Bean, French and Runner.
Phellostroma tsugae on *Tsuga sieboldii*, 3031.
 Phenazine-5N-monoxide against *Xanthomonas oryzae*, 473, 474.
 Phenolics in relation to host response, 1260h.
 Phenols, effect on *Fusarium oxysporum* f.sp. *vasinfectum* on cotton, 3308.
 — in banana roots, effect of *F. o.* f.sp. *cubense*, 2134.
 Phenotil against *Peronospora tabacina*, 250.
 Phenthiuram as seed treatment for Coni-ferae, 3023; tobacco, 250.
 — molybdate as seed treatment for Coni-ferae, 3023.
 Phenyl ethyl alcohol, effect on *Agrobacterium tumefaciens*, 1892.
 Phenylmercuric naphthalene against *Plasmopara viticola*, 530.
 Phenylmercury dimethylthiocarbamate against *Sclerotinia fructicola* on peach, 2922.
 1-phenylpropane derivatives, antifungal activity, 1551.
 Phenyl mercury acetate, see PMA.
 — — bromide, see Agronol.
 — — chloride, see PMC.
Philodendron oxycardium, *Xanthomonas* on, factors affecting, 2510.
 — —, — *dieffenbachiae* on, USA, description, 330o.
Phleospora crescentium, NZ, 3183.
Phleum pratense, *Cladosporium phlei* on, Norway, 1406, 1407; factors affecting and inoculation, 1406.
 — — diseases, Japan, 179a.
 Phloridzin, effect on *Uromyces appendiculatus* and *Venturia inaequalis*, 1516.
 Phloroglucin toxicity to *Phytophthora infestans*, 2975.
Phlox virus, Rumania, related to cucumber mosaic virus, 771.
Phoenix dactylifera, see Date Palm.
Phoma acuta on *Heracleum sphondylium* and *Urtica dioica*, 3640.
 — *chrysanthemicola* on *chrysanthemum*, 2282d.
 — — on *Chrysanthemum indicum*, 2501.
 — *destructiva*, germination, 2288.
 — — on tomato, 1488.
 — *exigua* on potato, 3077n.
 — — var. *foveata* on potato, see Potato.
 — *herbarum*, nomenclature, sporogenesis and synonymy, 3674.
 — — var. *medicaginis* on clover, 184.
 — — — — on lucerne, 2898, 3364.
 — *psidii* on guava, 1742.
 — *urens* on poplar, 270.
Phomopsis caraganae, *Fusicoccum caraganae* identical with, 2345.
 *— *cocoae* on coconut, 2966.
 — *dauci* on carrot, 1527.
 — *juniperovora*, hosts, 2673.
 — — on *Juniperus chinensis* and *J. virginiana*, 2672.
 — *obscurans*, CMI description, 2338.
 — *sclerotoides* on cucumber, 909c, 2266 2282k.
 — *vexans* on eggplant, 1244, 2722.
 — *viticola* on grapevine, 1745, 2282l, 3420.
Phormium tenax disease, mycoplasma-like bodies associated with, 1667.
 — —, *Glomerella phacidiomorpha* on description, 2494.
 Phosphorus deficiency, effect on susceptibility of cotton to *Fusarium*, 3306.

GENERAL INDEX

[Phosphorus deficiency] in lucerne, 2898.
 —, effect on *Phytophthora infestans*, 3450;
 tobacco necrosis virus on bean, 1515;
Tunstallia aculeata on tea, 2628; *Xanthomonas* on *Philodendron oxycardium*, 2510.
 — utilization by *Curvularia lunata* var. *aeria* and *C. ovoidea*, 3638.
Phragmidium butleri on rose, 3181a.
 — *mucronatum* and *P. tuberculatum* on rose, 2892.
Phthalan against *Macrophoma georgica* on *Laurus nobilis*, 1681.
Phthaloxin as bulb treatment for tulip, 178.
Phycomyces blakesleeanus, nuclear division, 1985.
Phycomycete on *Cotinus coggygria* and *Rhus typhina*, forming mycorrhiza in Poland, 3617.
Phycomycetes, keys for identification, Polish book, 2782.
 —, aquatic, India, 3559; culturing and studying, 3681.
Phygon against *Podosphaera leucotricha*, 1079; *Septoria lycopersici*, 2651; *Trichometasphaeria turcica* on maize, 2461; *Uncinula necator*, 810; *Uromyces dianthi* on carnation, 169; as seed treatment for rice, 3267.
 **Phyllachora domingensis* on *Picramnia pentandra*, 773.
 ?— *maydis* on maize, 743.
 *— *musicola* on banana, 524.
 *— *simplex* on *Coccoloba diversifolia*, 773.
Phyllactinia corylea, study on conidia, 7, 3121.
Phyllanthus acidus, *Glomerella phyllanthi* on, cultural behaviour of isolates, 2153.
 — —, *Phakopsora phyllanthi* on, Sabah, 3562i.
Phyllostachys, see Bamboo.
Phyllosticta oryzina on rice, 2058.
 — *tabaci*, resemblance of *P.* on tobacco to, 849.
 — *trifolii* and *P. trifoliiseda* on clover, 1059.
 — *vincae-majoris* and *P. vincae-minoris* on *Vinca minor*, 2513.
 — *zeae* on maize, 135, 3083c.
 **Phyllostictina dioscoreae* on *Dioscorea dumetorum*, 327e.
Phymatotrichum omnivorum on cotton, 3311a, b.
 — —, *Trechispora brinkmanii* perfect state of, 2350.
Physalis floridana, potato leafroll virus on, 233; electron microscopy and purifying, 3443; transmission by vectors, 3444.
Physalospora obtusa on apple, 2907.
 — on pear, 795, 1719.
 — *rhodina* causing cotton boll-rot, 2077.
 —, effect of C & N sources on taxonomic characters, 1987a, b.
 — on cotton, 2078, 2079.
Phytar 560 inducing *Hevea* rubber wintering, 1467e.
Phytia Society proposed, 336.
Phytoactin, effect on *Cronartium ribicola* on pine, 2675.
Phytoalexins in bean, 2320; lucerne, 1065, 2521; pea, 1203, 2320; potato, 1462; soybean, 331g, 2240.
 —, role in plant immunity, 2743.
Phytobacteriomycin against *Podosphaera leucotricha*, 2533.
 —, effect on virulence of *Pseudomonas tabaci*, 2996.
Phytoferritin in relation to plant viruses, 2365.
Phytolacca americana, virus inhibitor from, 401, 2021.
Phytopathological Lab., Baarn, history, 1879.
 — practice, book (German), 1259.
Phytopathology, A treatise on agricultural, Vol. 2, 1541.
 —, Annual Review, Vol. VII, 1260.
 —, Madagascar, bibliography, 3743.
Phytophthora arecae on *Agave*, 1385.
 — *botrys* on *Hevea* rubber, see Rubber.
 — *cactorum* in soil, 2335.
 — — on apple, see Apple.
 — — on strawberry, 1, 2727a, 2933.
 — *capsici* on *Capsicum*, 1.
 — —, structure of sporangium, 391, 2352.
 — *cinnamomi*, hosts, 2093.
 — —, Congo, 89.
 — — in soil, see Soil.
 — — on avocado pear, 218a, b.
 — — on *Chamaecyparis lawsoniana*, 1538g.
 *— — on Coniferae, 1800.
 *— — on oak, 2658.
 *— — on passion fruit, 2943.
 *— — on peach, 5j.
 *— — on pine, 2658.
 — — on *Pseudotsuga menziesii*, 2189g.
 — — on shrubs and trees, 572.
 — —, sexual reproduction, 3624.
 — —, sporangial production, 3565a, 3623.
 — *citrophthora* on citrus, see *Citrus*.
 — — on orange, 480.
 — *cryptogea* on *Gerbera*, 775, 3338.
 — — on *gloxinia*, 330m.
 — *drechsleri*, genetics, 2351.
 — — hosts, 1530.
 — — in soil, 3679.
 — — on safflower, see Safflower.
 — *erythroseptica* on potato, 1870c, *2161, *2972.
 — *fragariae* on strawberry, see Strawberry.
 — *heveae*, obtaining protoplasts, 3622.
 — — on cacao, 1873b.
 — — on *Hevea* rubber, 2165d.
 — *infestans*, effect of media on aggressiveness, 2602.
 — —, genetics, 1247i.
 — — inhibiting potato virus X, 324g, 665.
 — — in soil, 3451, 3679.
 — — nuclei in haustoria, 827.
 — — on *Mirabilis jalapa*, 3451.
 — — on potato, see Potato.
 — — on tomato, see Tomato.
 — —, pectic enzyme activity, 1940.
 — —, variation in progeny, 67.
 — —, vegetative hybridity in, 2603.
 — *meadii* on *Hevea* rubber, 2165c.
 — *XP. palmivora* on *Hevea* rubber, 1469.
 — *megasperma* on lucerne, 185.
 — — var. *sojae* in soil, 1221, 3658, 3679.
 — — — — on *Althea rosea* and lupin, 1849.
 — — — — on soybean, see Soybean.
 — *nicotianae*, factors affecting growth, 1284, 2768.

GENERAL INDEX

[*Phytophthora nicotianae*] on *Agave*, 1385.
 — — — on *Hevea* rubber, 2165d.
 * — — on tobacco, see *Tobacco*.
 — — — on tomato, 1538d.
 — — —, retraction of flagella, 692.
 — — — var. *parasitica*, Congo, 85; Hawaii, 1740a.
 — — — — in soil, 2776, 3658.
 ? — — — — on *Acacia mearnsii*, 1789.
 — — — — on *Bougainvillea*, 3084a.
 — — — — on citrus, see *Citrus*.
 — — — — on *Hibiscus cannabinus* and *H. sabdariffa*, 165.
 * — — — — on *H. sabdariffa* var. *altissima*, 2082.
 — — — — — on orange, 330d, 480, 1877b.
 — — — — — on papaw, 1740a, 3410.
 — — — — — on *Piper betle*, 535.
 — — — — — on *Tephrosia* and tobacco, 166.
 — — *palmivora*, electron microscopy, 68, 691.
 — — — Congo, 89.
 — — — in soil, 2776.
 — — — on *Agave*, 1385.
 — — — on black pepper, see *Pepper, black*.
 — — — on cacao, 2389b.
 — — — on eggplant, 937.
 — — — on *Hevea* rubber, see *Rubber*.
 — — — on orange, 2483.
 — — — on papaw, 3561c.
 — — — on *Piper betle*, 1447.
 — — — on *P. colubrinum*, 2955.
 — — — on *P. tuberculatum*, 3563a.
 — — —, premature oogonial germination, 2785.
 — — — *×P. meadii* on *Hevea* rubber, 1469.
 — — — *phaseoli* on *Phaseolus lunatus*, 3565g.
 * — *porri* on leek, 3537.
 — — *syringae* in soil, 1712.
 — — — on apple, 1712, *2908.
 — — — *verrucosa* on tomato, 1870d.
 Phytosanitation, Africa, handbook for inspectors, 3574.
Picea, see *Spruce*.
Pichia membranaefaciens, effect of infectivity of potato virus X on potato, 1453; on tobacco, 2173.
 * — *Picramnia pentandra*, *Phyllachora domingensis* on, USA, 773.
Pieris brassicae, *Tarichium gammae* on, USSR, 347.
 Pigeon pea (*Cajanus cajan*), *Phoma* on, var. react., 919e.
 — — — sterility mosaic virus on pigeon pea, 604, 1224, 2242.
Pileolaria terebinthi on pistachio nut, 1749.
 Pimaricin against apple Jonathan spot, 794.
Pimpinella anisum, see *Anise*.
 Pine (*Pinus*), *Alternaria* on, control, 583.
 —, *Amylostereum areolatum* on, *Sirex noctilio* associated with, 1495.
 —, *Arceuthobium americanum* on, USA, spread, 3037.
 —, *Armillaria mellea* on, not forming mycorrhiza, 662.
 —, *Ascochyta piniperda* on, 573.
 —, *Boletus elegans* on, forming mycorrhiza, 660.
 —, — *granulatus* on, forming mycorrhiza, 660, 2747.
 —, — *grevillei* and *B. luteus* on, forming mycorrhiza, 1911.
 [Pine, *Boletus*] *variegatus* on, forming mycorrhiza, 2747.
 —, boron deficiency in, 1176.
 —, *Cenococcum graniforme* on, forming mycorrhiza, 1911.
 —, *Ceratocystis* spp. on, pathogenicity, 3497.
 —, chlorosis, 2674.
 —, chlorotic dwarf disease, USA, 2680; air pollution in relation to, 584, 1812, 2680.
 —, *Coleosporium campanulae* can infect, 277.
 —, *Colletotrichum acutatum* on, E. Africa, 22861; Kenya, control, 1806.
 —, *Coniophora puteana* on, biology, 3039; effect on heartwood compounds, 1809.
 —, *Corticium solani* on, control, 1167; effect on, 661.
 —, *Coryne sarcoides* on, effect on heartwood compounds, 1809.
 —, *Cronartium comandrae* on, USA, 274; *(Tenn.), *Comandra umbellata* alternate host, 275; nuclear condition and germination of aeciospores, 2209.
 —, — *comptoniae* on, nuclear condition and germination of aeciospores, 2209.
 —, — *fusiforme* on, genetics, 580.
 —, — *quericum* on, hyphal growth in cambium, 872.
 —, — *ribicola* on, 331z; USA, 2677, 3037; breeding against, 579, 3496; canker characteristics, 2677; control, 1802; effect of phytoactin, 2675; growth of apart from host, 2208; inactivation of cankers, 276; resistance, 2207, 2676, 3495; spread, 3037; susceptibility of tissue cultures, 1168.
 —, damping-off, 1167; Tanzania, control, 16b.
 —, *Dendroctonus ponderosae* on, fungi in maxillary mycangium, 3038.
 —, dieback, Chile, boron deficiency causing, 1176; E. Africa, *Diplodia* causing, 1169.
 —, *Digitosporium piniphilum* on, Estonia, conidial state of *Crumenula sororia*, 1808.
 —, *Diplodia* on, E. Africa, 1169.
 —, — *natalensis* on, E. Africa, 22861.
 —, — *pinea* on, 278; Victoria, causing dead top, 2190i.
 —, disease, UK, virus-like particles associated with, 2189i.
 —, diseases, review, 1493.
 —, drought injury, 3497.
 —, *Elytroderma deformans* on, Canada, 257e.
 —, *Endocronartium harknessii* and *E. pini* on, 578.
 —, *Endogone lactifluia* on, forming mycorrhiza, 22, 3614a.
 —, *Fomes annosus* on, Finland, 875, 2190g; Jamaica, 2657; USSR, 1173; antagonism of *Peniophora gigantea*, 2679; of *Trichoderma*, 280; causing root infection, 2657; control, 279, 1173; effect of root extracts on growth, 281; inoculation, 2204; Mucorales associated with, 1175; thermal inactivation of basidiospores and conidia, 1810; transmission by vectors, 875.
 —, — *fomentarius* on, biology, 3039.
 —, — *pini* on, effect on heartwood compounds, 1809.
 —, fungi on, causing blight, symptoms, 282; degrading bark lignin, 1498; forming mycorrhiza, 2746.

GENERAL INDEX

[Pine], *Fusarium* on, control, 583.
 —, *Fusicoccum tingens* on, E. Africa and Uganda, 3493.
 —, *Glomerella cingulata* on, Cuba, morphology, 1172.
 —, grey sterile fungus on, 1095.
 —, heartwood fungi, effect on, 3494.
 —, *Laccaria laccata* on, forming mycorrhiza, 1911.
 *—, *Lachnellula flavovirens* on, Canada, 257f.
 —, *Lophodermium pinastri* on, France, 1170; Hungary, 873; Jamaica, 2657; effect of needle extracts on growth, 1171; factors affecting, 873; forecasting, 873; karyological study, 1804.
 —, *Macrohomina phaseoli* on, germination, 1807.
 —, *Melampsora populnea* on, effect of growth regulating substances, 3035.
 —, mycorrhiza, Italy, 3612; NZ, 3111; effect of waterlogging, 854d; effect on nutrient uptake, 1911; factors affecting, 3111; polyphenols, 1912.
 —, *Nectria fuckeliana* on, Canada, pathogenicity, 1496.
 —, needle blight, 2674; ozone causing, 1177.
 —, nursery diseases, USA, popular leaflet, 2674.
 —, ozone injury, 857; needle blight in relation to, 1177.
 —, *Penicillium piscarium* in rhizosphere, effect of methyl bromide, 1971.
 —, *Peniophora pseudo-pini* on, effect on heartwood compounds, 1809.
 —, *Peridermium harknessii* on, Canada, 257d.
 —, — *pini* on, Scotland, age of host and other factors affecting losses, 870; lesion formation, 871, 3036; mode of infection, *Tuberculina maxima* hyperparasitizing, 3036.
 *—, *Phytophthora cinnamomi* on, Argentina, 2658.
 —, *Pisolithus tinctorius* on, forming mycorrhiza, 661, 1911, 3112.
 —, *Polyporus vulpinus* on, biology, 3039.
 *—, *Pseudopachnidium piceae* on, Canada, pathogenicity, 1497.
 —, *Rhizopogon roseolus* on, forming mycorrhiza, 1911.
 —, root disease, Jamaica, Trinidad and Tobago, fungus causing, 2657.
 —, *Schizophyllum commune* on, Indonesia, resistance, 2210.
 —, *Scirrhia pini* on, Brazil, 581; NZ, 273, 854e; breeding against, 2286m; control, 854e, 1805b, 2286m; evaluation of infection, 1805a; factors affecting, 3033; study, 854e.
 —, *Scleroderris lagerbergii* on, 573; Canada, 2206; *USA (Minn.), 2205; ascospore release, 582; resistance, 2206.
 —, *Sclerophoma pithyophila* on, Australia, 3034; N. Ireland, 2726f; NZ, 854c; factors affecting, 3034.
 —, *Scoleconectria cucurbitula* on, Canada, pathogenicity, 1496.
 —, *Sirex noctilio* on, *Amylostereum aereum* in symbiosis, 283; effect on, 876.
 —, *Stereum sanguinolentum* on, effect on heartwood compounds, 1809.
 [Pine], *Thelephora terrestris* on, forming mycorrhiza, 2319, 2746, 3112.
 —, *Trichoderma* in rhizosphere, effect of methyl bromide, 1971.
 —, — on, control, 16b.
 —, *Tuber albium* on, forming mycorrhiza, 3613.
 —, — *maculatum* on, forming mycorrhiza, 3614b.
 —, *Tympanis hypopodia* on, effect on heartwood compounds, 1809.
 *— virus disease, UK, 571d, 2189i.
 —, *Waitea circinata* on, effect of root exudates, 1494.
 — juice, inhibiting turnip mosaic virus on *Chenopodium amaranthicolor* and radish, 1186.
 Pineapple (*Ananas comosus*) black spot, *Fusarium*, leathery pocket and *Penicillium* on, S. Africa, control, 3412.
Pinus, see Pine.
Piper betle, *Cinnabrella aequatorialis* on, India, 1109.
 *— —, *Oidium piperis* on, India, 3425.
 — —, *Phytophthora nicotianae* var. *parasitica* on, control and factors affecting, 535.
 — —, — *palmivora* on, formation, 1447.
 — —, *colubrinum*, *Fusarium solani* f.sp. *piperi* and *Phytophthora palmivora* on, resistance, 2955.
 — *nigrum*, see Pepper, black.
 — *tuberculatum*, *Phytophthora palmivora* on, Sarawak, resistance, 3563a.
Piptocephalis virginiana, lysosome contents, 2291.
 — — on *Mycotypha microspora*, 6.
Piricularia, see *Pyricularia*.
 Pisatin formation induced in pea by ethylene, 1841.
Pisolithus tinctorius on pine, forming mycorrhiza, 661, 1911, 3112.
 Pistachio nut (*Pistacia vera*), *Pileolaria terebinthi* on, Egypt, 1749.
Pisum sativum, see Pea.
Pittosporum tobira, *Rhizoctonia ramicola* on, hyphal fusion and nuclear condition, perfect state newly described as *Ceratobasidium ramicola*, 963.
Planococcoides njalensis transmitting cacao swollen shoot virus, *Cephalosporium* against, 1265.
 Plant diseases, Africa, 2799, 3574; Cambodia, 2393; Canada, 3610; Caribbean, 2396, 2729; C. America, Mexico and Panama, 3740; Denmark, 3081; Ethiopia, 3739; Germany (E.), 2284; Guatemala, 3185; India, 326; Iran, 418, 1320; Japan, 2744; Laos, 3734; Lebanon, 982, 2395; Mediterranean, 910a; NSW, 3738; NZ, 3183; Poland, 1537a, m; *Sarawak, 2394, 3563b; *S.E. Asia and Pacific, 2392; Surinam, 713; Sweden, glasshouse, 1571; Thailand, 419, 3733; UK, 3730; USA, 2397, 3109; Yugoslavia, 1572, 1573; breeding against, 337, 1577, 3556a; catalogue of colour slides 3569; chemical control of post harvest, 3098; control, 326, 1260a, 1875; economic bases for protection against, 1260b; effect of water stress in vascular, 3570; epidemiology, 2397; factors affecting, 3745; forecasting, 1537m, 2397; a guide to, 2nd

GENERAL INDEX

ed., of Russian book, 342; handbook for phytosanitary inspectors, 3574; induced mutations for breeding for resistance, 1248b; introduction to, book, 1257; irrigation and, 910a, 1260k; legislation against in Canada, 3610; Caribbean, 2729; Denmark, 3609; New Caledonia, 2287; USA, 3109, 3609, methods for assessing, 2308h; evaluating losses, 3179, 3180; ?mycoplasma causing, 2382, 2384; natural resistance, 2727a; seed-borne, 2287, 2801; annotated list, new ed., 3080; identifying, 3746; soil-borne, effect of crop rotation and organic amendments, 2027e; storage and retrieval of data concerning, 1881, 3568; warning service against, 912.

[Plant] immunity, biochemical aspects, translation of Russian monograph, 3089.

—, role of phytoalexins and phytohicides, 2743.

— pathogens, exotic, temporary quarantine lab. for research in Italy, 1880.

— pathological methods, book on, 1886.

— pathology, Dept of, Versailles, review, 915; Dictionary of, Russian-English-German-French, 1540; immunoserology in, 3082a; UK, history, 1260a; introduction to, Brazilian book on, 1258; report on research activities of Inst. (São Paulo, Brazil), 4; (1st) University lecture on, USA, 1250; use of isotopes and radiation in, 1248j.

— protection, Austria, 1872, 3597; Bulgaria, 1871a; Germany, 931, 3110; Pakistan, 3; against post-harvest losses, 2287; appliances and component parts I, II, III, 654; bibliography of literature, 3567; compendium and instructions on the use of plant protection products, 1897; computerised assessment of crop losses, 1871b; in the collective garden, popular manual, 1543; indexing literature, 920; low volume techniques for, 326; methods in, 3744; overhead irrigation and, 3187; role of bactericides and fungicides in, 326.

— taxonomy, geography and ecology in the Estonian SSR, book, 1542.

— tumours, isotopes in study of, 1248c; tissue culture in, 335.

Plantago, tobacco rattle virus can infect, 3321.

— *lanceolata*, tobacco ringspot virus on, epidemiology and transmission by vectors, 3700.

— *major*, aster yellows on, effect of achromycin and aureomycin, transmission by vectors, 2024.

Plantvax against *Colletotrichum agaves* on sisal, 1046; *Puccinia striiformis* on wheat, 1330; *Uromyces appendiculatus*, 3565e; as seed treatment for wheat, 107, 1597; as soil treatment, 107.

— ineffective as seed treatment for maize and phytotoxic, 3241.

—, see also DCMOD.

Plasmodiophora brassicae on *Brassica*, 188, 2694, 3078a.

— on cabbage, 287, 3501.

— on cauliflower, 321b.

— on Cruciferae, 1318, 2728g.

— on turnip, 2693.

— on watercress, 330h.

—, sterol requirement, 2769.

Plasmopara halstedii on sunflower, 2963.

— *viticola* on grapevine, see Grapevine.

Pleiochaeta setosa on lupin, 784.

Plenodomus destruens on sweet potato, 3551.

Pleocystis sacchari on sugarcane, 1928.

Pleospora bjoerlingii on beet, see Beet.

*— *herbarum* on apple, 1081.

— on broad bean, 1412.

— on clover, 505, 1059.

— on lucerne, 1065a, 1412.

**Pleurotus ostreatus* on *Cedrela odorata* and *Duranta repens*, 1791.

— *sajor-caju* on timber, 587.

Plum (*Prunus domestica*), apple chlorotic leaf spot virus on, 189.

—, — mosaic virus on, identification and serology, 1725.

—, *Ascospora beijerinckii* on, Rumania, 212.

*—, *Aspergillus niger* on, Egypt, insects associated with, 2126.

—, *Aureobasidium pullulans* on, Czechoslovakia, 800.

— bark split virus on plum, effect on yield, 1724.

—, Danish line pattern virus on plum, identification, 1725.

— decline disease, ?*Prunus* necrotic ringspot virus causing, 1724.

— diseases, control, 650.

—, *Lambertia corni-maris* can infect, 202.

— latent virus on plum, Rumania, 2524.

— line pattern virus on plum, Rumania, 2522z; effect on yield, 1724; identification and serology, 1725.

—, *Polystigma rubrum* on, Rumania, 212; control and factors affecting, 517.

— pox, component viruses and properties, 2522k.

— virus, Rumania, 2522z; epidemiology, 2523j; hosts, 1909; isolating and purifying, 2523c; legislation against in Sweden, 1909.

— — on apricot, 2523d.

— — on fruit trees, 2548.

*— — on herbaceous plants and *Lamium amplexicaule*, 3387.

— — — on *Nicotiana clevelandii*, 2282f.

— — — on plum, 1429; Rumania, 1430, 2524; Switzerland, 2544; *Turkey, 85b; Yugoslavia, 2546; breeding against, 2523b; control, 2544; effect on enzyme activity and respiration, 2550; on polyvalent chromosomes, 3386; hosts, 2547; intracellular inclusions, 2547; isolating, 2545, 2920; systemic infection, 2546.

— — — on *Prunus spinosa*, 2549.

*— — — on *Ranunculus arvensis*, 3387.

— — — on stone fruit, 1428.

*— — — on *Zinnia*, 3387.

— — — like virus disease, study, 2523a.

—, prune dwarf virus on, effect on yield, 1724; identification, 1725.

—, *Prunus* necrotic ringspot virus on, identification, 1725.

*—, *Pseudomonas* on, Canada, similarity to symptoms in England and USA, 1434.

—, — *mors-prunorum* on, UK, bacteriocinogeny, lysogeny, and phage types, distribution, 1091.

—, — *syringae* on, USA, epidemiology and mode of infection, 3393.

— ringspot virus, effect on yield, 1724.

GENERAL INDEX

[Plum], *Sclerotinia laxa* on, Chile, factors affecting, 1086; Rumania, 212.
 — stripe mosaic virus on plum, Czechoslovakia, 1428.
 —, *Tranzschelia pruni-spinosae* on, Rumania 212.
 —, *Tripospermum* on, Czechoslovakia, 800.
 — virus, hosts and isolating, 2545.
 — diseases, Denmark, 1416; detecting, 2523g; serology, 2523e.
 PMA against *Botryosphaeria corticis* on *Vaccinium corymbosum*, 2129; *Gloesporium albo-rubrum* on *Hevea* rubber, 3460; *Glomerella cingulata* on coffee, 3288; *Plasmopara viticola*, 530; as seed treatment for barley, 3220; cotton, 3298b.
 —, effect on *Pyricularia oryzae*, 3262a, b.
 PMC against *Plasmopara viticola*, 530; *Sclerotinia fructicola* on peach, 2922; *Venturia inaequalis*, 511.
Poa pratensis, *Calonectria nivalis* on, Canada, 1690.
 —, *Cercospora herpotrichoides* on, effect of crop rotation, 2426.
 —, *Claviceps purpurea* on, Germany (E.), 3358.
 —, *Cochliobolus sativus* on, cellulolytic and pectolytic enzymes, 3353.
 —, *Drechslera dictyoides* on, sporulation, 1055.
 —, *poae* on, USA, 2098.
 —, *Erysiphe graminis*, *Helminthosporium vagans* and *Puccinia poae-nemoralis* on, Germany (E.), breeding against, 3358.
 —, *Sclerotinia borealis*, *Typhula incarnata* and **T. ishikariensis* on, Canada, incidence and resistance, 1690.
 —, *Urocystis agropyri* on, 1405.
 —, *Ustilago striiformis* on, 1405; USA, 2097, 2098; causing smutted inflorescences, 2516; control, 2097, 2098; dissemination, 2516; mode of infection and perennial nature, 3357.
Podocarpus totara, mycorrhizal nodules, 663.
Podosphaera leucotricha on apple, see Apple.
 — on pear, 1720.
 — *oxyacanthae* on cherry, 199.
 ?— var. *tridactyla* on apricot, 1433.
Pogostemon cablin, *Pseudomonas syringae* on, Malawi, 1874d.
**Poinciana regia*, *Agrobacterium tumefaciens* on, Egypt, 344.
Pollaccia radiosoides on aspen, 257d.
 — on poplar, 1163.
 —, *Phaeoramularia maculicola* on poplar distinct from, 3489.
Polyacrylamide gel electrophoresis, use in taxonomy of *Puccinia* spp., 386.
Polybor as stump treatment for Coniferae, 645a.
Polycarbacin against *Peronospora tabacina*, 2643.
 —, resistance of *Corticium solani* to, 3601.
Polygonum alpinum, fungi on, USSR, 3186.
Polymycin as seed treatment for wheat, 1614.
Polymyxa betae associated with beet 'rhizomania', 3508i.
 — on beet, 288, 1195.
 — *graminis* transmitting virus diseases, 1307.
Polyporaceae, fruitbody development and sporulation, 1542a.
Polyporus betulinus, antibacterial activity of mycelia, 3607b.
 — *borealis* on timber, 1181.
 — *glomeratus* on *Acer*, 259.
 — — on *A. saccharum*, 2660.
 — — on birch, 259.
 — *maximus* and *P. sanguineus* on timber, 587.
 — *schweinitzii* on forest trees, 571a; unidentified growth factors for, 955.
 — *stipticus* on timber, 1181.
 — *tomentosus* on spruce, 878.
 — —, technique for storing sporophores, 394.
 — *vulpinus* on aspen and pine, 3039.
 — *zonalis* on *Celtis laevigata*, 3011.
Polyram against *Physalospora rhodina* on cotton, 2079; *Uromyces appendiculatus*, 3565e; as seed treatment for potato, 1754c, 2607.
 — 80 against *Venturia inaequalis*, 2285j; a seed treatment for barley, 3225.
 — M against *Albugo candida* on Indian mustard, 1823.
 — M80 WP against *Peronospora tabacina*, 1138.
 — combi against *Colletotrichum agaves* on sisal, 1046; *Peronospora tabacina*, 2643; *Phytophthora infestans* on potato, 1537l.
 — ultra against *Botrytis cinerea* on strawberry, 802.
Polyspora lini on flax, see Flax.
Polystictus abietinus on spruce, 585.
 — *sanguineus* on timber, 2692.
 — *versicolor* degrading rutin, 42.
 — — on *Acer saccharum*, 2660.
 — — on timber, 285b.
 — — on trees and shrubs, 1156.
Polystigma rubrum on plum, 212, 517.
Pome fruit diseases, control, 1707, 2534.
 —, *Podosphaera leucotricha* and *Venturia inaequalis* on, biology, 1705.
 — — virus disease, Poland, 1537a.
Pomegranate (*Punica granatum*), *Nectriella versoniana* on, Yugoslavia, 3405.
 —, *Pestalozzina punicae* on, USSR, 2104.
 —, *Sphaceloma punicae* on, Yugoslavia, 2945.
Poncirus, Satsuma dwarf virus on, susceptibility, 478.
Poplar (*Populus*) [see also *Aspen*], *Aplanobacter populi* on, breeding against, 2201; resistance, 2189d.
 —, *Cryptodiaporthe populea* on, aetiology, 1796; resistance, 1492.
 — diseases, review of resistance, 2190f.
 —, *Dothichiza* on, distribution of trichocarpin, 2282e.
*—, *Drepanopeziza punctiformis* on, UK, perfect state of *Marssonina brunnea*, 2668.
 —, fungi on, USSR, 3020.
*—, *Macrosporium commune* on, USSR, 3020.
 —, *Marssonina brunnea* on, Europe, 3488; Italy, 269; Sardinia, 268; breeding against, 2201; control, 269, 3488; resistance, 2189d.
 —, — *castanei* on, Sardinia, 268.
 —, — *populi* on, Scotland, 1870h.
 —, *Melampsora* on, breeding against, 2201.
 — mosaic virus on poplar, 571c; UK, *Nicotiana megalosiphon* alternate host, 2189i.

GENERAL INDEX

[Poplar]. *Pezicula populi* on, Japan, 2200.
 —, *Phaeoramularia maculicola* on, N. America and Sweden, description, distinct from *Pollaccia radiososa*, 3489.
 —, *Phoma urens* on, control and factors affecting, 270.
 —, *Pollaccia radiososa* on, Europe and N. America, over-wintering, spread and taxonomy, 1163.
 —, *Stereum purpureum* on, France, infectivity and mode of entry, 2669.
 —, *Taphrina populinella* on, development, 719; effect on, 718; on sugar content, 1162; mode of infection, 865.
 —, *Tuber albium* on, forming mycorrhiza, 3613.
 —, *Venturia macularis* on, USSR, damage, overwintering and symptoms, 3019.
 *—, — *populinella* on, Canada, 257f.
 — virus diseases, breeding against, 2201.
Populus grandidentata, see Aspen.
tremula and *P. tremuloides*, see Aspen.
Poria hypobrunnea on *Cupressus*, 2286n.
 — *hypolateritia* on tea, 245, 2170b.
 — *monticola* form of *Ceriporiopsis placenta*, 2687a.
 — *obliqua* on *Acer*, 259.
 — on birch, 259, 2193.
 — *placenta* form of *Ceriporiopsis placenta*, 2687a.
 — *terrestris* on *Pseudotsuga menziesii*, 2318.
 — *vaporaria* on timber, 1183.
 —, form of *Ceriporiopsis placenta*, 2687a.
 — *weiri* on alder, 260b, c.
 — on *Pseudotsuga menziesii* and *Thuja plicata*, 879.
 Potassium against *Botryosphaeria corticis* on *Vaccinium corymbosum*, 2129.
 — deficiency, effect on susceptibility of cotton to *Fusarium*, 3306.
 — in grapevine, 2573; tangor, 330b.
 —, effect on hollow heart of potato, 2978; leaf spot of *Ficus elastica*, 2504; metabolism of beet with beet yellows virus, 1190, 1508; resistance of grapevine to *Agrobacterium tumefaciens*, 2572; virus-infected apple, 1697; *Xanthomonas* on *Philodendron oxycardium*, 2510.
 — azide as seed treatment, 3604.
 — bromide, effect on *Ustilago maydis* on maize, 1355.
 — chloride, effect on microflora in rhizosphere of *Eleusine coracana*, 3664.
 — dichromate against *Fusarium (?) solani* on *Antirrhinum*, 2880.
 — permanganate against *Podosphaera leucotricha*, 1078.
 — sulphate, effect on salt injury to *Acer platanoides*, 1160.
 —, see also Fertilizers.
 Potato (*Solanum tuberosum*), *Acrostalagmus* and *Alternaria* on, 828.
 —, *Alternaria solani* on, India, 1464; USSR, 2967; control, 1754e, 2604; effect of soil moisture, 983; factors affecting, 2604, 2967; losses, 1464; sporulation, 1281.
 — Andean latent virus, effect of organic Hg compounds, 3693.
 — — —, eggplant mosaic virus related to, 978.
 [Potato Andean] mosaic virus on *Nicotiana clevelandii*, 978.
 *—, aster yellows on, *Peru, 2972; transmission by grafting and vectors, 981.
 — aubera mosaic virus, purification, 1759.
 — bacterial soft rots, 3077n.
 — black spot, USA, studies, 1754a; effect of CO₂, 2977.
 —, *Botrytis cinerea* on, effect of ozone injury, 241.
 —, *Cephalosporium* on, 828.
 — coiled sprout, England, tuberisation associated with, 2612; factors affecting, 2613.
 —, *Colletotrichum coccodes* on, Afghanistan and Pakistan (W.), 1910.
 —, *Corticium* on, control, 542.
 —, — *solani* on, Irish Republic, 2608; Netherlands, 1538i; Poland, 2610; USSR, 237, 2609; control, 237, 2310, 2610; effect of soil sterilization, 2608; factors affecting, 1122; var. react., 2609.
 —, *Corynebacterium sepedonicum* on, effect of sugar content, 240; legislation against in Norway, 1466.
 —, *Diplodia* can infect, 2121.
 — diseases, India, 1112; Mexico, 2155; N. Ireland, 2726b; Peru, 2972; USA, 2583; breeding against, 3556a, d; manual for early warning, 2582.
 *—, *Erwinia atroseptica* on, *Peru, 2972; control, 239; effect of overhead irrigation, 1318; fungicides ineffective against, 238; maceration by pectolytic enzymes, 829; Advis. leafl., 1125.
 —, — *carotovora* on, Germany (E.), 2284.
 —, *Fusarium* on, Peru, associated with tuber diseases, 2973; fungicides ineffective against, 238; resistance, 2973.
 —, — *roseum* on, control, 1754c.
 —, — *solani* can infect, 2280.
 —, — on, inhibition by phytoalexins, 1462; by rishitin, 2743.
 —, — var. *eumartii* on, var. react., 2976, 3456.
 —, — *trichothecoides* on, NSW, aetiology, 3454.
 —, *Geotrichum candidum* on, Wales, 1764.
 —, *Gliocladium* on, 828.
 — 'gothic' virus on potato, USSR, 1113, 1454; losses, symptoms and transmission, 1454.
 —, grey sterile fungus on, 1095.
 —, *Helminthosporium solani* on, Austria, 1123; control, 541, 1122, 1123; effect of temp. on development in storage, 235b; factors affecting, 541, 1122; soil properties in relation to, 2611; spread and symptoms, 1123.
 — hollow heart, factors affecting, 2978.
 — internal brown spot, factors affecting, 830.
 — leaf roll virus on *Datura stramonium*, 3443.
 — — — on *Physalis floridana*, 3443, 3444.
 — — — on potato, 2155; Canada, 1754d, 2157; *Fiji, 1877b; Japan, 3445; Poland, 2591; UK, 1755; USA, 330g; USSR, 1113; aphids in relation to, 1754d; breeding against, 3556d; control, 824, 3445; detecting, 1116, 1872; effect of microelements, 1305; epidemiology, 2157; spread, 2591; transmission by vectors, 233, 1755, 2157, 2591, 2968, 3445, 3699; var. react., 330g, 2157, 3078b.

GENERAL INDEX

*[Potato], *Macrophoma* on, Peru, 2972.
 —, *Macrophomina phaseoli* on, nutritional requirements, 1124.
 —, *Memnoniella* on, 828.
 —, mild mosaic virus on potato, 2155.
 —, mop-top virus on potato, 2726b; Irish Republic, 2598; *Peru, 2972; *Spongospora subterranea* not associated with, 3077f; symptoms, 2598, 3077f; transmission by phycomycetes, 415; var. react., 3078b.
 —, mosaic virus on potato, effect of micro-elements, 1305.
 —, mottling virus on potato, USSR, 1113.
 —, *Mycogone* on, 828.
 —, *Oospora pustulans* on, effect of aretan, 1122; factors affecting, 235a, 1122; var. react., 3078b.
 —, paracrinkle virus on bean, 3442.
 — — on potato, USSR, 1113.
 —, *Penicillium* on, 828.
 —, *Phoma exigua* on, 3077n.
 — — var. *foveata* on, factors affecting, 3455, 3557b; spread of mycelium in, 3557b.
 —, *Phytophthora erythroseptica* on, Scotland, 1870c; *Peru, 2972; *Egypt, 2161; growth on different media, 2161.
 —, — *infestans* on, 1754e; Austria, 1118; Canada, 1457; Cyprus, 911, 1876c; Germany (E.), 2284; India, 3446, 3452; *Iraq, 3731b; Israel, 3448; Japan, 1763a; Poland, 323, 1537l; UK, 1461; USA, 2600; USSR, 1762, 2967, 3482; accumulation of risithin, 539; adenine metabolism, 324n; biology, 2c; control, 635a, 826, 911, 1119, 1120, 1458, 1537l, 2310, 3077o, 3446, 3593f; effect of copper oxychloride, 1761; lime, 635c; organo-tins, 2974, 3449; overhead irrigation, 1318; paraffin wax, 1761; phenols, 2975; effect on resistant and susceptible plants, 2285b; epidemiology, 2a; factors affecting, 1460, 1762, 2967, 3446, 3447, 3448, 3450; forecasting, 2a, 540, 1118, 1876c, 2285d; galactanose from, 2601; genetics, 1763a, b; infection by compatible and incompatible races, 2159; inhibition by phytoalexins, 1462; by risithin, 2743; methods of applying fungicides, 3593h; microradioautography of leaves, 3453; overwintering, 3482; pathogenicity, variation in, 538; physiologic races, 1459, 1461, 1762, 1763a, 3452; differentiation of, 1117; virulence of, 2160; resistance, 1460, 2282b, 2600; spore dispersal, 2a; spread, original, 1457; survival in soil, 234, 3451; var. react., 1459, 1461, 3078b.
 —, *Pseudomonas solanacearum* on, Ceylon, 343; Kenya, 637a; Nigeria, 328e; *Peru, 2972; biotypes, 343; control, 1465; factors affecting, 343.
 —, purple top virus on potato, 2155.
 —, *Rhizoctonia* on, USSR, factors affecting, 2967.
 —, rugose mosaic virus on potato, 2155; USSR, 1113.
 —, *Sclerotinia sclerotiorum* on, 1754b; *Coniothyrium minitans* and *Trichoderma viride* parasitizing, 682.
 —, *Septoria* on, Peru, 2972.
 —, spindle tuber virus on potato, USSR, distribution, 2596; tomato test for elimination, 1758; transmission by pollen and seed, 2595.
 [Potato], *Spongospora subterranea* on, Germany (E.), 2284.
 —, spraing, Irish Repub., 2598; assessment, 2597; tobacco rattle virus causing, 2597, 3170; transmission by vectors, 3170; var. react., 3078b.
 —, stolbur on, Czechoslovakia, 2599; Israel, 3438; USSR, 1113, 3172; control, 3172; ecology, 2599; effect of microelements, 1305; factors affecting, 2599; symptoms, 3172; transmission by grafting, 3438; by vectors, 2599, 3172.
 —, *Streptomyces* on, 544; Norway, 543; soil properties in relation to, 2611.
 —, — *scabies* on, Germany (E.), 2284; Irish Repub., 1765; breeding against, 635b; control, 238, 3077n, o; effect of sulphur, 635; factors affecting, 3457; var. react., 1765, 2976, 3078b, 3456.
 —, *Synchytrium endobioticum* on, breeding against, and new biotypes, 1455; factors affecting, 1456; host relationships, 2158; tissue culture, 236.
 —, tobacco rattle virus on, factors affecting, 3557h.
 —, *Trichogyne* on, 828.
 —, tuber diseases, N. Ireland, 2726b; Peru, 2973; control, 2308a, 2726b, 3077n; *Fusarium* associated with, 2973; survey, 3077n.
 —, *Verticillium albo-atrum* on, Canada and USA, 828; causing leaf and sprout infection, 2606; control, 2162, 2607; host-parasite relations, 1463; resistance, 534; var. react., 2976, 3456.
 *—, — *dahliae* on, England, 2605; *Turkey, 3182b; USA, 828; host-parasite relations, 1463; latent infection, 324p; survival in tubers, 2605.
 —, — *nubilum* on, causing coiled sprout, 235c.
 —, virus diseases, Aegean, 232; Argentina, 1949; Irish Repub., 2586; Israel, 3437; Mexico, 2155; USSR, 1113, 2360; breeding against, 232; detection and diagnosis, 2586, 2587, 3436; by electron microscopy, 2727s; effect of insecticides on vectors, 824; elimination by heat treatment and meristem tip culture, 909s; factors affecting, 3435; identifying, 324o; producing virus free stock, 3437; surveys, 2155; var. react., 2584, 2585.
 — — A on potato, electron microscopy, 1538v; extracting and purifying, hosts, 3441.
 — — C, effect of potato virus Y on, 3077h.
 — — K on potato, effect on, 1114.
 — — M on potato, Malawi, 1874a; improving serum, 2282h; precipitating, 2588; testing for, 3078b.
 — — S, indicators for, 2593.
 *— — — on *Chenopodium*, 2593.
 — — — on potato, Malawi, 1874a; *Peru, 2972; USSR, 1113, 2967; effect on, 825, 1114; electron microscopy, 1538v; factors affecting, 2967; serological diagnosis, 2594; losses, 1114; precipitating, 2588; preparing antisera, 2282h, 2971; producing virus-free material, 1538u; testing for, 2794, 3078b.
 — — — + potato viruses X and Y on potato, effect on, 2592.
 — — — group on pea, 1538k.

GENERAL INDEX

[Potato virus] X, CMI/AAB description, 3151.
 — — —, demonstrating, 1538m.
 — — —, effect of oxidized phenols, 3714.
 — — —, infectivity and isolation of RNA from, 3077e.
 — — — inhibited by medicinal plant extracts, 537; by polysaccharide from *Phytophthora infestans*, 324q, 665.
 — — —, lyophilization of antisera, 2793.
 — — — on *Capsicum*, 3712.
 — — — on *Datura stramonium*, 407, 408, 2017, 2018.
 — — — on *Gomphrena globosa*, 1756, 2018.
 — — — on *Hyoscyamus niger*, 3711.
 — — — on *Nicotiana glutinosa*, 3167, 3696.
 — — — on potato, Malawi, 1874a; USSR, 1113, 2967; biochemical changes, 1537f; breeding against, 635b, 3556d; detection, 1451; effect of medicinal plant extracts, 2156; UV light, 1452, 1757; yeasts, 1453; effect on CO_2 fixation, 3698; on host, 635b, 1114; electron microscopy, 1538v, 3077j; factors affecting, 2967; losses, 1114; luminescence microscopy of X bodies, 1115; precipitating, 2588; producing virus-free material, 1538u; serological detection, 1450, 2794; testing for, 3078b; ultrastructure, 407.
 — — — on Solanaceae, 3711.
 — — — on tobacco, see Tobacco.
 — — — on tomato, 3709.
 — — —, preservation and purification, 536.
 — — — serology, 977, 2282h, 3713.
 — — —, transmission by phycomycetes, 415.
 — — —+potato virus K on potato, effect on, 1114.
 — — —+potato virus S on potato, effect on, 2592.
 — — —+potato virus Y on *Chenopodium murale*, 2589.
 — — —+tobacco mosaic virus on tomato, 331r.
 — — — hybrid with tobacco mosaic virus, properties, 3710.
 — — — mottle str. on *Capsicum*, 3547.
 — — — ringspot str. on *Capsicum*, 3548.
 — — Y, distinction between tobacco etch virus and, 3165.
 — — —, effect on potato virus C, 3077h.
 — — — on *Capsicum*, 906, 2274, 2719.
 — — — on *Datura metel*, 821.
 — — — on Leguminosae, 1538k.
 — — — on potato, Israel, 3437; Poland, 2590, 2591; USSR, 2967; breeding against, 635b, 3556d; factors affecting, 2967; field inoculation, 2590; luminescence microscopy of X bodies, 1115; precipitating, 2588; properties and symptoms, 821; spread, 2591; transmission by vectors, 821, 2591, 2796, 3437; var. react, 3078b.
 — — — on *Solanum*, 2969.
 — — — on tobacco, see Tobacco.
 — — —, symptom development, 3440.
 — — —, variation in, 2012.
 — — Y+potato virus S on potato, 2592.
 — — Y^N on potato, Kenya, 637b; S. America, origin and spread, 2970; electron microscopy, 1538v.
 [Potato virus] Y^o on potato, electron microscopy, 1538v.
 — witches' broom disease, 2155; effect of tetracycline and mycoplasma-like bodies in, 1760.
 — — — on tomato, 3481.
 — yellow dwarf virus, micro-ecology and multiplication in insect vector, 412.
 PP-675 against *Exobasidium vexans*, 2170e; *Sphaerotheca fuliginea* on cucumber, 3069.
 PP781 against *Ganoderma pseudoferreum* on *Hevea* rubber, 1467a.
 Pratylechus brachyurus, effect on *Phytophthora nicotianae* on tobacco, 1137.
 — minyus, effect on *Verticillium dahliae* on peppermint, 2150.
 — penetrans in relation to *Fusarium roseum* on carnation, 1396.
 — — — on lucerne, 1070.
 Primula mottle virus on *Primula*, relationships, 3346.
 Privet (*Ligustrum*) infectious variegation virus on privet, Rumania, 771.
 Proceedings, see Conferences.
 Prometryne, effect on *Fusarium oxysporum* f.sp. *vasinfectum* in soil, 1969.
 Propineb, effect on *Alternaria brassicicola*, 3555c.
 Propionic acid against storage disorders of maize, 324j.
 Protomyces macrosporus on coriander, 1106a, b.
 Prune (*Prunus domestica*) dwarf virus, CMI/AAB description, 3151.
 — — — on cherry, 209, 1087, 3383.
 — — — on cucumber, 3383.
 — — — on plum, 1724, 1725.
 — — — on *Prunus mahaleb*, 1087.
 — — — on squash, 3383.
 — — —+*Prunus* necrotic ringspot viruses on fruit trees, 2522m.
 Prunus, cherry ringspot viruses on, 2522x.
 — latent virus, transmission by vectors, 2523i.
 — necrotic ringspot virus (?) causing plum decline, 1724.
 — — —, chemical properties, 2525.
 — — —, CMI/AAB description, 3151.
 — — —, hop necrotic crinkle mosaic virus serotype, 2008a.
 — — — on cherry, 209, 1087.
 — — — on cucumber, 2263, 3383.
 — — — on peach, 2918, 3383.
 — — — on plum, 1725.
 — — — on *Prunus mahaleb*, 1087.
 — — — on stone fruit, 2522m, n.
 — ringspot viruses, relationships, 2522l.
 — amygdalus, see Almond.
 — armeniaca, see Apricot.
 — avium, see Cherry.
 — cerasus, see Cherry.
 — domestica, see Prune and Plum.
 — divaricata, *Massariella pruni* on, USSR, 2104.
 — effusa ringspot virus, ?new virus, resemblances, 2522w.
 — mahaleb, apple chlorotic leafspot virus can infect, 1698.
 — — —, prune dwarf and *Prunus* necrotic ringspot viruses on, inactivation in seed, 1087.
 — pennsylvanica, *Godronia confertus* on, Canada, pathogenicity, 858.

GENERAL INDEX

[*Prunus*] *persica*, see Peach.
 — *spinosa*, plum pox virus on, Yugoslavia, symptomless host, 2549.
Psammotettix transmitting oats and wheat virus, 3752.
 — *alienus* transmitting wheat striped mosaic virus, 1537b; incubation period, 1537c.
Pseudomonas aeruginosa, biochemistry and nutrition, 924.
 — — on mushroom, 909h.
 — *angulata* on tobacco, 558d, 2995.
 — *azadirachtae* on *Azadirachta indica*, 1790.
 — *cannabinae* on hemp, 166.
 — *caryophylli* on carnation, 3328.
 * — *cichorii* on chicory and escarole, 1569a.
 — *cinnamona* on rice, 2062.
 — *coronafaciens*, CMI description, 3090.
 — —, comparison of toxins, 2297.
 — — on *Lolium multiflorum*, 2099.
 * — *fabae* on broad bean, 302.
 — *flaccumfaciens* on bean, 1517.
 — *fluorescens*, biochemistry and nutrition, 924.
 — — on broad bean, 303.
 — *glycinea* on soybean, see Soybean.
 — — + *Xanthomonas phaseoli* var. *sojense* on soybean, 304.
 — *glumae* on rice, 2062.
 — *lachrymans*, characteristics of isolates, 1889c.
 — — on cucumber, see Cucumber.
 — — on tobacco, 2179, 3581.
 — —, properties of specific antigens, 1889b.
 — —, serological identification and variation, 1889a.
 — *lapsa* on maize, 3787.
 — *lupini* on lupin, 187.
 — *marginata* on *Gladiolus*, 3339, 3340.
 — *mellea* on hemp, 166.
 — *mori*, effect of radiation, 2296.
 — — on hemp, 166.
 — *mors-prunorum* on cherry, see Cherry.
 — — on fruit trees, 3093.
 — — on plum, 1091.
 — *mycophaga*, antibiotic from penetrating melon and tomato seed, 657.
 — *oryzicola*, CMI description, 3090.
 — — on rice, 2062.
 — *passiflorae*, *Xanthomonas passiflorae* on passion fruit distinct from, 2139.
 — *phaseolicola* on bean, see Bean.
 — — on *Phaseolus*, 3555h.
 — — transmission by nematodes, 1893.
 — — + *Uromyces phaseoli* on bean, 3242.
 — *pisi* on pea, 603, *1840, 2697.
 — — on tobacco, 2179.
 — *putida*, biochemistry and nutrition, 924.
 ? — — stimulating mushroom sporophore production, 375.
 — *ruberlineans* on sugarcane, 546.
 — *rubrisubalbicans* ?causing sugarcane red stripe disease, 2625.
 — *saliciperda* on *Salix alba*, 3492.
 — *savastanoi* on olive, 1442.
 — *sesami* on sesame, 1751, 2389a, 2961.
 — *setariae*, CMI description, 3090.
 — *solanacearum*, antagonism among str., 12.
 — — hosts, 2735.
 — — inhibited by antibiotic from *Streptomyces griseoplanus*, 3108.
 — —, Malaya, non-development on inoculated hosts, 13.

[*Pseudomonas solanacearum*] in soil, 1261.
 — — on banana, 805, 3579.
 * — — on *Capsicum*, 637a.
 — — on cotton, 161.
 — — on eggplant, 1, 2723.
 — — on groundnut, 307.
 — — on jute, 2495.
 — — on *Musa textilis*, 3579.
 — — on potato, see Potato.
 — — on *Solanum phureja*, 1766.
 — — on tobacco, see Tobacco.
 — — on tomato, 343, 1490.
 — —, pigment production, 2298.
 — — *striafaciens*, CMI description, 3090.
 — — *syringae*, β glucosidase system, 2736.
 — — on apple, 1714, *2912.
 — — on bean, 3526.
 — — on broad bean, 303.
 — — on cucumber, 2299.
 — — on fruit trees, 192, 3093.
 ? — — on lucerne, 1414.
 ? — — on pear, see Pear.
 — — on plum, 3393.
 — — on *Pogostemon cablin*, 1874d.
 — — on squash, 2299.
 — — on tobacco, 642, 2179.
 — — *tabaci*, comparison of toxins, 2297.
 — —, effect of radiation, 2296.
 — — on tobacco, see Tobacco.
 — — *tolaasii* on mushroom, 909h, 21867.
 — *xanthochlora* on lupin, 187.
Pseudoperonospora cubensis on cucumber, see Cucumber.
* — — on melon, 328f.
— — on watermelon, 2270.
— *humuli* on hop, 1747, 2284.
* — *manchurica* on soybean, 2390a.
Pseudopeziza medicaginis on lucerne, 2898.
— *ribis* on currant, see Currant.
— *tracheiphila* on grapevine, see Grapevine.
— *trifolii* on clover, 1059.
Pseudophacidium ledi on birch, *Chamaedaphne calyculata*, *Ledum groenlandicum*, *Rhododendron canadense* and *Vaccinium angustifolium*, 1497.
— *piceae*, Canada, 257c.
— — on *Abies balsamea*, *pine and *spruce, 1497.
* *Pseudotsuga menziesii*, *Coniophora fusispora* on, Canada, 257f.
— — damping-off, 1178.
— —, *Endogone lactifluia* on, forming mycorrhiza, 22, 3614a.
— —, *Fomes annosus* on, control, 1814; factors affecting decomposition, 3498; resistance, 2189b.
— —, — *pinicola* on, effect on diameter increment, 1813.
— —, fungi on, forming mycorrhiza, 3611.
— —, *Fusarium oxysporum* on, nematodes in relation to, 1178.
— — mycorrhiza, deficiency, 1913; effect of waterlogging, 854d; polyphenols, 1912.
— —, *Nectria radicicola* on, control, 1178.
— —, *Phaeocryptopus gaeumannii* on, NZ, 854a.
— —, *Phytophthora cinnamomi* on, UK, 2189g.
— —, *Poria terrestris* on, forming mycorrhiza, in Canada, 2318.
— —, — *weiri* on, effect of extracts from *Thuja plicata*, 879.

GENERAL INDEX

[*Pseudotsuga menziesii*], *Rhabdocline pseudotsugae* and *R. weiri* on, 877.
 — — —, *Rhizosphaera kalkhoffii* on, NZ, 854b.
 — — —, *Scirrhia pini* on, NZ, study, 854e.
 — — —, *Stereum sanguinolentum* on, effect on diameter increment, 1813.
 — — —, *Thelephora terrestris* on, forming mycorrhiza, 3112.
Psidium guajava, see Guava.
Puccinia antirrhini on *Antirrhinum*, see *Antirrhinum*.
 — — — *arachidis* on groundnut, 3062.
 — — — *caborensis*, new sp. on *Heliantheae*, 385.
 — — — *carthami* on safflower, 2957.
 — — — *chrysanthemi* on *chrysanthemum*, 2499.
 — — — *cordiae* on *Cordia alliodora*, 2657.
 — — — *coronata*, directed growth in uredospore, germ tubes, 939.
 — — — on barley, 988.
 — — — on grasses, 2838.
 — — — on *Lolium perenne*, 635d.
 — — — on oats, see Oats.
 — — — on wheat, 988.
 — — — transmitted by birds, 3571.
 — — — *glumarum*, see *P. striiformis*.
 — — — *graminis*, apparatus for monitoring uredospores in rain, 2035.
 — — — associated with wheat brown necrosis, 993.
 — — — germination of uredospores, 3122.
 — — — haustoria-like branches in axenic cultures, 1325.
 — — — hosts, 2406.
 — — — in the air, 2406.
 — — — USSR, hosts, and specialized form, 2033.
 — — — metabolism in uredospores, 2321.
 — — — on barley, see Barley.
 — — — on cereals, 2802, 2811.
 — — — on cocksfoot, 1688.
 — — — on flax, 490.
 — — — on grasses, 325, 780, 2802.
 — — — on oats, see Oats.
 — — — on rye, 3189.
 — — — on wheat, see Wheat.
 — — — taxonomic significance of protein patterns, 386.
 — — — ultrastructural studies of uredospores, 2037, 2039.
 — — — *helianthi*, genetics, 224.
 — — — on sunflower, 3430a, b.
 — — — *hordei*, Czechoslovakia, physiologic races, 2831.
 — — — on barley, see Barley.
 — — — on wheat, 988.
 — — — taxonomic significance of protein patterns, 386.
 — — — *menthae* on *Mentha cardiaca*, 2579.
 * — — — on *M. spicata*, 1103.
 — — — on peppermint, 2579.
 * — — — *mixta* on chives, 1525.
 — — — *oahensis* on *Digitaria procumbens*, 919b.
 * — — — *pelargonii-zonalis* on *Pelargonium*, *1569b, *2509, *3081.
 — — — *penniseti* on *Pennisetum typhoides*, 136.
 — — — *phragmitis* in USSR, 3186.
 — — — *poae-nemoralis* on *Poa pratensis*, 3358.
 — — — *polygoni-alpini* in USSR, 3186.
 — — — *polysora* on maize, see Maize.
 — — — *prostii* on tulip, 1389.
 — — — *purpurea* on sorghum, 3184.
 — — — *recondita*, apparatus for monitoring uredospores in rain, 2035.
 [*Puccinia recondita*] in the air, 2406.
 — — — on barley, 988, 3078a.
 — — — on flax, 490.
 — — — on grasses, 1329.
 — — — on oats, 3078a.
 — — — on wheat, see Wheat.
 — — — taxonomic significance of protein patterns, 386.
 — — — *soniae*, new sp. on *Heliantheae*, 385.
 — — — *sorghi* on maize, see Maize.
 — — — *striiformis*, electron microscopy, 106.
 — — — dispersal, 2288.
 — — — in air over wheat field, 996.
 — — — on barley, see Barley.
 — — — on *Bromus marginatus* and *Elymus cinereus*, 1596.
 — — — on oats, 3078a.
 — — — on wheat, see Wheat.
 — — — *triseti* and *P. triticina*, see *P. recondita*.
 * *Pucciniastrum epilobii* f.sp. *palustris* on *Fuchsia*, 322.
 — — — *pustulatum* on *Abies alba*, 272.
 — — — *sparsum*, *Thekopspora sparsa* aelial state, 3499.
Pueraria lobata, *Mycovellosiella puerariae* on, Papua & New Guinea, disease in Taiwan ascribed to *Ramularia puerariae*, 2901.
Pumpkin (*Cucurbita pepo*), cucumber mosaic virus on, effect on respiration, 2023.
 — — — watermelon mosaic virus on, Qd, electron microscopy and transmission by vectors, 622.
Pycnoporus coccineus on timber, 2691.
Pyrenopeziza dolichi on *Dolichos biflorus*, 3058.
 — — — *lycopersici*, NZ, 3183.
 — — — on Cucurbitaceae and Solanaceae, 716.
 — — — on tomato, see Tomato.
 — — — technique for lyophilization of sterile cultures, 393.
 — — — *terrestris* in rhizosphere of lucerne, 3363.
 — — — in soil, 612.
 — — — mannitol biosynthesis in, 27.
 * — — — on leek, 1569a.
 — — — on onion, 612, 1230.
Pyrenophora avenae on oats, see Oats.
 — — — transmitted by birds, 3571.
 — — — *graminea* on barley, see Barley.
 — — — on cereals, 2031, 3753.
 — — — on rye and wheat, 2046.
 — — — *teres*, effect of light and temp. on sporulation, 117.
 — — — on barley, see Barley.
Pyricularia grisea on banana, 1643, 2135.
 — — — *oryzae*, genetics, 140.
 — — — hosts, 3561a.
 — — — India, races, 2473.
 — — — on rice, see Rice.
 — — — serology, 3082a.
 — — — *setariae* on *Setaria italica*, 471.
Pyridine alkane and *pyridine carbinol* compounds against turf diseases, 3355.
Pyridinitrile against *Podosphaera leucotricha* and *Venturia inaequalis*, 3374.
 — — — new organic fungicide, 2308u.
Pyridinitrile, synergism with captan against *Venturia inaequalis*, 2727e.
Pyrocatechol against *Cercospora beticola*, 1830.

GENERAL INDEX

Pyrogallol against *C. beticola*, 1830.
 —, toxicity to *Phytophthora infestans*, 2975.
Pyrus, Erwinia amylovora on, resistance, 1721.
 — *communis*, see Pear.
Pythiaceae on cultivated plants and fruit trees, Congo, 89.
Pythium, tobacco mosaic virus in, 82.
 — *?acanthicum*, growth and sexuality, 2767.
 — in rhizosphere of *Dactyloctenium aegyptium*, 2774.
 — on strawberry, 2131.
 — *aeratile* on turf, 3354.
aphanidermatum, hosts, 1900.
 —, Congo, 89.
 — in soil, 2776, 3129.
 — on beet, 2029.
 — on cantaloupe, 623.
 — on *chrysanthemum*, 1678.
 — on crops, 2398.
 — on cucumber, 3543.
 — on *Eleusine coracana*, 86.
 — on rye, 3129.
 — on *Sesbania aculeata*, 86.
 — on tomato, 3129.
 — on turf, 3354.
arrhenomanes on maize, 2844.
artotrogus, oospore formation and germination, 1986, 3626.
 — *butleri*, Congo, 89.
 —, obtaining protoplasts, 3622.
 — on bean, 299.
 — on *Luffa cylindrica*, 1862.
catenulatum on turf, 3354.
debaryanum, Congo, 89.
 — on bean, 1215.
 — on beet, 2284, 3508I.
 — on *Begonia*, 2085.
 — on cucumber, 3068.
 — on groundnut, 3061.
 — on lucerne, 1411.
 — on pea, 297.
 — on tomato, 566, 1784.
 — on safflower, 1752.
 — on turf, 3354.
 — on vetch, 2728d.
deliense on *Phaseolus aureus*, 86.
dissotocum on strawberry, 2131.
 — on turf, 3354.
 — on vetch, 2728d.
hypogynum on strawberry, 2131.
irregularare, appressoria, 1301.
 — on beet, 288, 3508c, h.
 — on peach, 3389.
 — on strawberry, 2131.
 — on turf, 3354.
 * — on wheat, 3181a.
myriotylum in soil, 3129.
 — on bean, 298.
 — on crops, 2398.
 — on *Cyamopsis psoraloides*, 86.
 — on groundnut, 2250, 2252.
 — on rye and tomato, 3129.
oedochilum, Congo, 89.
 — on cauliflower, 86.
perniciosum and *P. rostratum* on strawberry, 2131.
rostratum on turf, 3354.
spinosum in soil, 2776.
splendens, Congo, 89.
 — in soil, 2775.
 — on safflower, 2959.
 — on tobacco, 690.

[*Pythium*] *sylvaticum* on apple, 190b.
 — on strawberry, 2131, 2934.
torulosum on turf, 3354.
ultimum, effect of soil solutions, 56.
 —, hyphal tip growth, 3143.
 —, Congo, 89.
 — in soil, 960, 2775.
 — on *Cucurbitaceae*, 2716.
 — on *Euphorbia pulcherrima*, 2886.
 — on hyacinth, 777.
 — on lily, 2091.
 — on maize, 1015.
 — on pea, 895.
 — on safflower, 1752.
 — on strawberry, 2131.
 — on turf, 3354, 3355.
vexans, Congo, 89.
 — on peach, 3389.
 — on turf, 3354.
violae on hyacinth, 777.

Q_B virus, RNA-polymerase enzyme, 2727r.
Quercus, see Oak.
Quince (*Cydonia oblonga*), *Agrobacterium tumefaciens* on, var. react., 2538.
 * —, *Cylindrosporium pomi* on, *India, USA, severity and symptoms, 1717.
 —, *Sclerotinia laxa* on, Chile, 1086.
 —, *Valse cincta* on, USSR, 1089.
 Quinolate against *Diaporthe perniciosa* on apple, 1425.
 — 20, effect on yield and quality of beet, 1828.
 Quinoline n-oxide, effect on *Verticillium dahliae*, 3629.
 Quinomethionate against *Marssonina salicicola* on *Salix alba*, 3491; *Pseudopeziza ribis* on currant, 214.
 —, effect on currant, 214.
 Quinosol against damping-off of vegetables, 3188; *Uromyces dianthi* on carnation, 169; as bulb treatment for tulip, 178.
 Quintozene accumulated by *Corticium solani*, 1277.
 — against *Aspergillus niger* on groundnut, 1227; *Corticium rolfsii* on beet, 289, 290; on clover, 782; *C. solani* on beet, 289, 290; on cotton, 160; on potato, 2310; *Drechslera poae* on *Poa pratensis*, 2098; fungi on grasses, 1691; *Fusarium* on rye and wheat, 3754; *F. oxysporum* f.sp. *vasinfectum*, 155; *Macrohomina phaseoli* on *Hibiscus esculentus*, 2279; *Rhizopus* on groundnut, 1227; *Sclerotinia trifoliorum* on clover, 1694; *Typhula* on rye and wheat, 3754; *Verticillium dahliae* on cotton, 155; as seed treatment for wheat, 3211; as soil treatment, 1123, 1317; as timber preservative, 587.
 — degraded by *Fusarium oxysporum* f.sp. *lycopersici*, 1277.
 —, effect on germination of *F. solani* f.sp. *phaseoli*, 380; on hexosamine content of cell wall of *Neurospora crassa*, 19; on *Plasmoidiphora brassicae* on *Brassica*, 188 on soil fungi, 3662; on soil microflora, 380.
 — ineffective against *Thielaviopsis basicola* on bean, 1972; *Ustilago striiformis* on *Poa pratensis*, 2098.
 — injury to *Euphorbia pulcherrima*, 1400.
 — metabolism by phytopathogenic fungi, 2742.
 — selectivity, 652.

GENERAL INDEX

Radiation against prune dwarf and *Prunus* necrotic ringspot viruses on cherry, 1087.
 Radish (*Raphanus sativus*), *Alternaria japonica* on, Japan, absence of lignin, 286.
 —, *Cochliobolus miyabeanus* on, 141.
 —, *Corticium rolfsii* on, India, causing leaf rot, 3731a.
 —, — *solani* on, control, 3600.
 — enation mosaic virus, serology, 1187.
 —, *Macrophomina phaseoli* on, India, 3731a.
 — mosaic virus, serology, 1187.
 —, turnip mosaic virus on, inhibited by pine juice, 1186.
 —, Japanese (*Raphanus sativus* var. *raphanistrroides*), *Peronospora parasitica* on, forming lignin-like substance in root tissues, 592.
 Radosan as seed treatment for barley, 3220.
Ramularia beticola on beet, 3045, 3077p, 3556e.
 — *coriandri* development, 225.
 — — on Coriander, 225.
 — *decipiens* in USSR, 3186.
 — *kochiae* on *Kochia prostrata*, 496.
 — *pratensis* in USSR, 3186.
 *— *sphaeroidea* on *Lotus uliginosus*, 3738.
 — *vallisumbrosae* on *Narcissus*, 177.
Ranunculus breaking virus (panachure), new, on *R. asiaticus*, 910f.
 *— *arvensis*, indicator for plum pox virus, 3387.
 — *asiatica*, cucumber mosaic virus, *Ranunculus* breaking virus, tobacco necrosis and tobacco rattle viruses on, France, 910f.
 *— —, ?*Cephalosporiopsis* disease, France, control, 910c.
 Rape (*Brassica napus* var. *oleifera*) green petal disease, Hungary,? clover dwarf virus or mycoplasma causing, 2215, 3041; transmission by grafting, 3041.
 —, *Verticillium* on, Sweden, biology, 1503.
Raphanus sativus, see Radish.
 — — var. *raphanistrroides*, see Radish, Japanese.
 Raspberry (*Rubus*), *Armillaria mellea* on, Czechoslovakia, 2560.
 —, *Botrytis cinerea* on, control, 1435.
 — bushy dwarf virus on raspberry, aetiology 3557g.
 *— *Cercospora rubi* on, Czechoslovakia, 717.
 — crumbly berry disease, tomato ringspot virus causing, 215.
 —, *Didymella applanata* on, control, 2307x; effect of fungicides, 2725j; overwintering, 2725e.
 —, *Elsinoe veneta* on, control, 2307x.
 —, Lloyd George yellow blotch, raspberry ringspot virus causing, 2523k.
 — ringspot virus, CMI/AAB description, 3151.
 — — — in *Longidorus elongatus*, 979.
 — — — on *Chenopodium quinoa*, 414.
 — — — on fruit, *Advis*, Leafl., 785.
 — — — on *Nicotiana megalosiphon* and *Petunia hybrida*, 3718.
 — — — on raspberry, 2523k.
 — — — on stone fruit, 3384.
 —, tomato ringspot virus on, 215.
 — virus diseases, review, 520; 3557g; Russian manual, 3397.
 Reovirus, fine structure, 1567.
 Reports, see also Conferences, Argentina (INTA), 3085; (Tucuman), 545, 1249; Austria, Bundesanstalt Pflanzenschutz, Vienna, 1872; Belgium, (C. Rech. agron. Etat, Gembloux), 2; Brazil (Biol. Inst. São Paulo), 4; Cambridge (Pl. Breeding Inst.), 3556; Canada (Dept Fish. For.), 257; (Forest Prod. Lab.), 285; (Min. Agric. Quebec), 2285; (Phytopath. Soc.), 324; Caribbean (Pl. Prot. Commn FAO), 2729, 3564; Ceylon (Rubber Res. Inst.), 2163; Commonw. For. Inst., Oxford, 571; Cyprus (Agric. Res. Inst.), 1876; (Dept. Agric), 911; Denmark (Sta. Phytopath. Exp. Stn), 322, 3081; (State Seed Testing), 914, 3080; East Africa (Agric. & For.), 2286; (Trop. Pestic. Res. Inst.), 16; E. Malling Res. Stn, 2725; Ethiopia (Inst. Agric. Res.), 918; Fiji (Dept Agric.), 1877; Florida (Sta. Hort. Soc.), 330; Germany (Federal Biol. Inst.), 2282; (Pl. Prot.), 2283; Germany, E. (Biol. Zentralanst.), 2284; Ghana (Cacao Res. Inst.), 95; Glasshouse Crops Res. Inst., 909; Guyana (Min. Agric. nat. Resources), 3560; India (Natn. Acad. Sci. Sect. Biol. Sci.), 3559; (Rice Res. Inst., Cuttack), 2473; (Rubber Bd.), 2614; (Sug. Cane Breed. Inst., Coimbatore), 1127; (Tea sci. Dept un. Plr's. Ass.), 2170; (Tocklai, Tea), 2628; (Univ. Gorakhpur), 1470; Int. atom. Energy Ag., 1248; Irish Republic (Hort. Div. agric. Inst., Dublin), 3558; (Pl. Sci. Div. agric. Inst. Dublin), 635; Jersey (Dept Agric.), 321; Kenya (Coffee Res. Fdn), 2863; (Dept Agric.), 637; Long Ashton, 3079; Malawi (Pl. Path. Lab. Bvumbwe Res. Stn), 1874; Malaya (Div. Agric.), 3561; (Rubber Res. Inst.), 1467; Natn. Inst. Agric. Botany, Cambridge, 3078; Natn. Veg. Res. Stn. Warwick, 3555; Netherlands (Wageningen, Inst. Phytopath. Res.), 1538; Nigeria (Cocoa Res. Inst.), 721; (Dept agric. Res.), 327; (Inst. Oil Palm Res.), 2154; Samaru (Inst. agric. Res.), 328; N. Ireland (Res. & Tech. Work Minist. Agric.), 2726; NSW (Dept Agric.), 2728; NZ (Forest Res. Inst.), 854; Papua & New Guinea (Dept Agric.), 1878; Poland (Inst. Pl. Prot.), 1537; (Plant diseases), 323; Queensland (Bureau Sug. Exp. Stns), 1128; Réunion (IRAT), 917; Rhodesia (Tob. Res. Bd), 1774; Rothamsted Exp. Stn, 3077; Sabah (Dept Agric.), 329, 1873, 3562; Sarawak (Res. Brch Dept Agric.), 3563; Scotland (Hort. Res. Inst.), 3557; (W. Agric. Coll.), 1870; Senegal (IRAT), 916; S. Africa (Sug. Exp. Stn), 2618; S.E. Asia (Pl. Prot. Comm.), 2287; Taiwan (Tainan Dist. agric. improv. Stn), 3237; Tanzania (Exp. Stns Cott. Res. Corp., 761; Tunisia (INRA), 2902; UK (For. Res.), 2189; Zambia (Res. Brch Minist. Agric.), 636.
 Rhabdocline *pseudotsugae* and *R. weiri* on *Pseudotsuga menziesii*, 877.
 Rheum, see Rhubarb.
 Rhizina undulata, Canada, 257f.
 Rhizobium leguminosarum, interspecific transformation between *Agrobacterium tumefaciens* and, 641.
 Rhizoctol as seed treatment for soybean, 2708.

GENERAL INDEX

Rhizoctonia carotae on carrot, stored, 615.
 —, *R.* on carrot different from, 3538.
fragariae on strawberry, 1733.
lamellifera on oil palm, 1111, 1873a, 3562g.
 — *oryzae* on rice, 3269.
 — *ramicola* on *Pittosporum tobira*, 963.
 — *zeae*, hyphal fusion, nuclear, condition and perfect state, 963.
Rhizopogon roseolus on pine, forming mycorrhiza, 1911.
Rhizopus arrhizus, electron microscopy, 332e.
 — on apple and mango, 3379.
 — on tobacco, 1774c.
 — *chinensis* and *R. oligosporus*, electron microscopy, 332e.
 — *stolonifer*, effect of anaerobiosis on germination and survival of sporangiospores, 29; of CO_2 and O_2 , 1948; of diquat, 923; of ozone on germination, 671; of paraquat, 378; of temp. on germinating spores, 3628a, b; on translocation of phosphorus, 951a.
 —, electron microscopy, 332e.
 —, hosts, 2939.
 —, inactivation of sporangiospores, 2752.
 — in soil, 2772.
 —, nuclear divisions in vegetative hyphae, 1985.
 *— on lupin, 784.
 — on strawberry, 2132.
 —, P metabolism and translocation, 951b.
Rhizosphaera kalkhoffii on *Pseudotsuga menziesii*, 854b.
 Rhodane as seed treatment for rice, 3267.
 **Rhododendron*, *Cercospora handelii* on, Greece, 3736.
 —, *Cylindrocladium* on, identification, 1401.
 — diseases, control, 3347.
 *— *Nectria radicicola* on, USA (Mass.), 168.
 —, *Ovulinia azaleae* on, UK, 1389.
 *—, *Pestalotia rhododendri* on, Greece, 3736.
 —, *Phomopsis* on, causing die-back, 2497.
 —, *Phytophthora cinnamomi* on, popular account, 2093.
 — *canadense*, *Godronia cassandrae* f.sp. *cassandrae* on, Canada, pathogenicity, 858.
 —, *Pseudopachacidium ledi* on, Canada, 1497.
 — *indicum*, *Cylindrocladium* can infect, 3084g.
 — *kaempferi*, *Exobasidium japonicum* on, ultrastructure of haustoria, 937.
 — *maximum*, *Cylindrocladium* on, 1401.
 — *obtusum*, *Cylindrocladium* can infect, 3084b.
Rhoeo discolor, tobacco mosaic virus str. on, particles and transmission, mechanically, 3565b.
Rhopalosiphum maidis transmitting barley yellow dwarf virus, 118, 1339.
 — *padi* not transmitting barley yellow dwarf virus, 2809; brome mosaic virus, 1566.
 — transmitting barley yellow dwarf virus, 118, 1339, 2431a, b, 2432.
Rhubarb (Rheum), cherry leaf roll virus on, 2725h.
 — producing virus free plants, 3555q.

Rhus typhina, phycomycete on, forming mycorrhiza, in Poland, 3617.
Rhynchosporium secalis on barley, see Barley.
 — on wheat, 3078a.
Rhytisma punctatum on *Acer macrophyllum* and *A. pseudoplatanus*, 2662.
Ribes, see Currant.
 — *glandulosum*, *Dothidea ribesia* on, Canada, 1496.
 — *grossularia*, see Gooseberry.
Rice (Oryza sativa), *Achlya klebsiana* on, USA, pathogenicity, 3796.
 —, *Alternaria* on, effect on germination, 3797.
 —, *Aspergillus* on, control, 751; effect on germination, 3797.
 — black-streaked dwarf virus on rice, genetics, 1363.
 *—, *Cercospora oryzae* on, Sarawak, 90.
 —, *Chromobacterium* on, effect on germination, 3797.
 —, *Cochliobolus miyabeanus* on, India, 2058; Nigeria, 327b, 1642; assessing disease development, 2476; control, 1646; effect of antibiotics, 3756; of N, 2475; electron microscopy, 3794; immunization against, 143; overwintering, 138; role of amino acids, 142; ultrastructural changes of chloroplasts, 3268; var. react., 2475.
 —, — *spicifer* on, effect on, 754.
 —, *Corticium sasakii* on, control, 1371; factors affecting, 3269; forecasting, 1371; geographical distribution, 3269.
 —, development of disease-resistant, 1260p.
 — disease, Kenya, ?virus, 637d; Sabah, unidentified fungus causing, 3562d.
 — diseases, India, 2473; Japan, 3798; apparatus for seed treatment, 1574; bacterial, 2062; breeding against, 2473; control, 3258, 3798.
 — dwarf virus on rice, control, 1635; forecasting, 1635, 1636; micro-ecology and multiplication in insect vectors, 412.
 —, *Erwinia carotovora* on, 2062.
 — fungi on, India, 2853; factors affecting, 2478.
 —, *Fusarium* on, effect on germination, 3797.
 — grassy stunt virus on rice, screening for resistance and transmission by vectors, 3793.
 —, *Helminthosporium sigmaeum* var. *irregulare* on, India, 2058.
 — hoja blanca virus on rice, particles and transmission by vectors, 2471.
 —, *Leptosphaeria iwamotoi* on, India, 2058.
 —, — *salvinii* on, overwintering, 138.
 — mercury residues in, 1372.
 —, *Micrococcus aurantiacus* on, effect on germination, 3797.
 — mycoflora, effect of kitazin, 139.
 — 'padi-jantan' disease, Malaysia, mycoplasma-like bodies associated with, syn. rice yellow dwarf virus, 3260.
 —, *Penicillium* on, effect on germination, 3797.
 — penyakit merah virus on rice, ?syn. rice tungro virus, transmission by vectors, 1364, 3261.
 —, *Phaeosphaeria oryzae* and *Phyllosticta oryzina* on, India, 2058.

[Rice], *Pseudomonas* on, effect on germination, 3797.

—, — *cinnamona*, *P. glumae* and *P. oryzicola* on, 2062.

—, *Pyricularia oryzae* on, Guyana, 3560e, f; Honduras, 1643; Japan, 1369; Nigeria, 327a, b, 1642, 3263; *Pakistan (W.), 2060; Sabah, 329a; control, 327a, 1369, 1645, 2308t, 2741, 3262a, b, 3267, 3560e, f, 3792b; effect of light on sporulation, 2059; of mixed inoculum, 1367; electron microscopy, 3265; factors affecting, 751, 2061, 3795; forecasting, 1366, 1644; genetics, 1368; over-wintering, 138; physiologic races, 2474, 3263, 3264; proteinase, 1019; review, 3267; spore dispersal, 752; sporulation, 2059; var. react., 329a, 753, 1368, 1643, 2060, 2063, 3560e.

—, *Pythium* on, USA, pathogenicity, 3796.

—, *Rhizoctonia oryzae* on, geographical distribution, 3269.

—, *Sclerospora macrospora* on, electron microscopy, 1647.

— seed treatment, Guyana, 3560e.

—, *Spicaria* on, effect on germination, 3797.

— storage disorders, 3258.

— straighthead, NSW, 2728a.

— stripe virus in *Laodelphax striatellus*, 751b.

— — on rice, Japan, 1365, 2852; breeding against, 1638; factors affecting, 1365; purification, 751; transmission by vectors, 1365; var. react., 1638.

— — on wheat, 751.

—, *Tilletia barclayana* on, Assam, 3270.

— transitory yellowing virus, Taiwan, electron microscopy, 1017; properties, 1016.

—, *Trichoconis padwickii* on, Sabah, 329b; control, 1022; effect on, 754.

— tungro virus on rice, Pakistan (E.), ?1639, 2851, 3259; control, 2472; factors affecting, 2851; ?new str., 3259; transmission by vectors, 1639, 2472, 2851, 3259; var. react., 3792a.

— —, syn. rice penyakit merah virus, 3261.

—, *Ustilaginoidea virens* on, var. react., 1021.

—, *Xanthomonas* on, effect on, 754.

—, — *atroviridigena* and *X. itoana* on, 2062.

—, — *oryzae* on, 474, 2062; India, 326, 2473; Sabah, 3562e; W. Malaysia, 3271; control, 473, 1260c, 2473; epidemiology, 1260c, 1648; losses, 2065; phages, 3271; screening against, 2855; serological relationships between str., 2064; var. react., 3792a.

—, — *oryzicola* on, 2062; India, 326; W. Malaysia, 144, *3732; effect of antibiotics, 2854; var. react., 2063.

— yellow dwarf, ?mycoplasma causing, 2385, 3260.

— — — virus on rice, Pakistan (E.), 1018, 3259; transmission by vectors, 1637, 3259.

— — — suggested name for rice 'padi jantan' disease, 3260.

— mottle virus on rice, Kenya, hosts, symptoms and transmission, 2850.

— yellows disease, mycoplasma-like bodies in, 1640, 1641.

Ricinus communis, *Agrobacterium tumefaciens* on, tumour formation, 3588.

*— —, *Alternaria ricini* on, Jamaica, 3564b.

*— —, *Clypeolella ricini* on, Nigeria, 327e.

— —, *Corticium salmonicolor* on, Sabah, 3562i.

— —, fungi on, control, 1750.

— —, *Macrophomina phaseoli* on, pycnidial form, 65.

Rishitin inhibiting *Fusarium solani* and *Phytophthora infestans*, 1462, 2743.

Robillarda vincae on *Vinca minor*, 2513.

Robinia pseudoacacia, strawberry latent ringspot virus on, differentiation of isolates and transmission, 1158.

Rogor against coconut lethal yellowing, 3564b.

Rosa, see *Rose*.

**Rosaceae, Sclerotinia laxa* on, NZ, 3737.

**Rose (Rosa)*, *Agrobacterium tumefaciens* on, Egypt, 344; comparative study on characteristics, 1891.

—, cherry necrotic ringspot virus on, antiserum for, 1538r.

—, *Coniothyrium wernsdorffiae* on, factors affecting, 500; var. react., 499.

—, *Diplocarpon rosae* on, Irish Repub., 3558b; S. Africa, 2890; *Advis. Leaflet*, 2094; breeding against, 2511; control, 2890, 3558b; resistance, 2511.

—, *Diplodia rosarum* on, 526.

— diseases, Spain, 1047; control, 1547.

—, *Gnomonia rubi* on, 573.

—, *Leptosphaeria coniothyrium* on in glasshouse, Germany (E.), 3349.

—, *Marasmius androsaceus* on, Scotland, 1870f.

— mosaic virus+*Pseudomonas* on rose, transmission, 3348.

— — +variegation, effect of heat treatment, 1538t.

—, *Phragmidium butleri* on, India, epidemic, 3181a.

—, — *murronatum* and *P. tuberculatum* on, UK, 2892.

—, *Sphaerotheca pannosa* on, Irish Repub., 3558b; S. Africa, 2890; control, 351a, 2310, 2890, 2891, 3558b; epidemiology, 2891; factors affecting resistance, 2095; method for assessing, 2308t.

—, — var. *rosea* on, *Advis. Leaflet*, 2094.

— variegation+mosaic, effect of heat treatment, 1538t.

— virus, Denmark, transmission by budding, 322.

— viruses, serology, 2523e.

Rosellinia bunodes on coffee, 485.

*— — *necatrix* on apple, 1426.

*— — on *Narcissus*, 3183.

Rubber (*Hevea brasiliensis*) abnormalities, non transmission, 1467f.

—, *Ceratocystis fimbriata* on, Malaysia, 831.

*—, *Cladosporium oxysporum* on, Sabah, 329c.

—, *Colletotrichum graminicola* and *C. dematium* on, pathogenicity, 2616b.

—, *Corticium salmonicolor* on, Malaysia, 831.

— diseases, Ghana, 88; Malaysia, 831; control, 831, 2164; factors affecting, 3458; review, 831, 2164.

GENERAL INDEX

[Rubber], *Fomes lignosus* on, Indonesia, 2167; Ivory Coast, 2165f; Malaysia, 831; control, 831, 2165f, 2167; spore germination, 1467a.

—, — *noxius* on, Malaysia, control, 831; spore germination, 1467a.

—, — *Ganoderma pseudoferreum* on, Malaysia, 831; control, 831, 1467a; spore germination, 1467a.

—, — *Gloeosporium albo-rubrum* on, Ceylon, effect of Hg, 3460.

—, — *Glomerella cingulata* on, Malaysia, control, 831; pathogenicity, 2616a, b; variability, 2616a; var. react, 1467b.

*—, — *Helminthosporium heveae* on, *Ghana, 1468; India, 2614c; Malaysia, 831; control, 831, 2614c.

—, — *Microcyclus ulei* on, Trinidad, 1467d; breeding against, 2165a; factors affecting, 1467d; legislation against introduction, 3459; review, 2617; testing for resistance, 1467d.

—, — *Oidium heveae* on, Ceylon, 2163a; India, 2614c; Malaysia, 831, 2165b, 2615; *Sarawak, 90; breeding against, 2165a; control, 831, 2614c; economics of, 2165b, 2615; sulphur ineffective against, 2163a.

—, — *Phytophthora* on, Cambodia, 2165e; Ceylon, 2163c; India, 2614a; Malaysia, 831; causing black stripe disease, 2165e; control, 831, 2165e, 2614a; hosts, morphology and oversummering, 2614a.

—, — *botryosa* on, Malaysia, 831, 1467c, 2165d, 2166; Thailand, 2166; control, 831; oospore germination, 1467c.

—, — *meadii* on, Ceylon, 2165c.

—, — — *×P. palmivora* on, 1469.

—, — *palmivora* on, Malaysia, 831, 1467c; control, 831; distribution, 2166; oospore germination, 1467c.

—, — — *×P. meadii* on, 1469.

— root rot, Papua & New Guinea, 1878.

—, — *Schizophyllum commune* on, Indonesia, resistance, 2210.

— wintering, aerial spraying control, 1467e.

— wound treatment, 2614b.

—, — *Xylaria ?thwaitesii* on, Ceylon, 2163b.

— material, legislation against importation into S.E. Asia, 1126.

Rubus stunt, ?mycoplasma associated, 3557j.

— *ellipticus*, *Pestalotiopsis versicolor* on, variation in character, 3675.

— *idaeus*, see Raspberry.

— *occidentalis*, see Raspberry.

Rumex acetosa, clover wound tumour virus on, tumours in, 980.

— *obtusifolius*, tobacco ringspot virus on, epidemiology and transmission by vectors, 3700.

Rumex, see also Dock.

Rusts, see Uredinales.

Rutabaga, see Swede.

Rye (*Secale cereale*), barley virus A₁ can infect, 3776.

—, brom mosaic virus on, 1566.

—, *Calonectria nivalis* on, control, 1537k.

—, *Claviceps purpurea* on, effect of conc. of inoculum on yield of sclerotia, 3236 a, b; of guttation fluid on growth *in vitro*, 123.

— diseases, NSW, 986.

—, *Erysiphe graminis* on, physiological specialization, 3757.

[Rye] frost injury, NSW, 986.

—, *Fusarium* on, Finland, 3754.

—, ?*Physoderma* can infect, 2442.

—, *Puccinia graminis* on, Canada, 3189; USSR, specialized form, 2033.

—, — *recondita* on, Germany (E.), spread, 2284.

—, — *Pyrenophora graminea* on, USSR, 2046.

—, — *Pythium* on, effect on germination, 124.

—, — *aphanidermatum* and *P. myriotylum* on, effect of soil temp., 3129.

—, — *Typhula* on, Finland, 3754.

—, wheat striped mosaic virus on, Poland, transmission by vectors, 1537b; incubation period, 1537c.

—, 'wheat variegation' disease on, 5h.

Saccharomyces carlsbergensis, effect on potato virus X on tobacco, 2173.

— *cerevisiae*, effect on potato virus X on potato, 1453; on tobacco, 2173.

Saccharum officinarum, see Sugarcane.

Safflower (*Carthamus tinctorius*), *Fusarium oxysporum* f.sp. *carthami* on, physiologic races, 2151.

—, *Phytophthora drechsleri* on, NSW, 2728f; antifungal compound produced by, 2580; resistance and symptom development, 2958; genetics of resistance and var. react, 2152.

—, *Puccinia carthami* on, genetics of resistance, 2957.

—, *Pythium debaryanum* on, NSW, 1752.

—, — *splendens* on, factors affecting, 2959.

—, — *ultimum* on, NSW, 1752.

—, *Verticillium albo-atrum* on, resistance, 534.

Safynol inhibiting *Phytophthora drechsleri*, 2580.

St. Augustine decline virus on *Stenotaphrum secundatum*, 1402.

**Saintpaulia ionantha*, *Erysiphe polyphaga* on, Denmark, 3081.

Salicylic acid, toxicity to *Phytophthora infestans*, 2975.

Salix, *Cryptodiaporthe salicella* on, *Discella salicis* proposed new comb., 3133.

—, fungi and **Macrosporium commune* on, USSR, 3020.

—, *Marssonina salicicola* on, UK, 2189f.

—, *alba*, *Erwinia salicis* on, Netherlands, identified with *Pseudomonas saliciperda*, 3492.

—, — *Marssonina salicicola* on, UK, breeding against, 3490; control, 3490, 3491.

Salt, see Sodium chloride.

**Salvia splendens*, *Corticium solani* on, 501.

Sambucus, cherry leaf roll virus on, 2725h.

— *canadensis* virus, Scotland, imported from America, 3557i.

Sandalwood (*Santalum album*) spike disease, anatomical study, 866, 3021; auxin activity, 1799; mycoplasma-like bodies in, 866, 1798, 2026.

Sansevieria diseases, Spain, 1047.

—, *Fusarium* and *Gibberella fujikuroi* on, control, 3350.

Santalum album, see Sandalwood.

Santomese F85 against *Aerobacter cloacae* and *Erwinia carotovora* on tomato, 330j.

Saprolegnia litoralis, obtaining protoplasts, 3622.

Satsuma dwarf virus, see *Citrus (Satsuma)* dwarf virus.

Schizaphis graminum not transmitting brome mosaic virus, 1566.

— transmitting barley yellow dwarf virus, 118, 1339.

Schizophyllum commune on apple, 3375.

— on bamboo, pine, *Hevea* rubber and teak, 2210.

Scilla peruviana, *Cladosporium scillae* on, NZ, description, 3183.

Scrirhia acicola on pine, 2674.

*— *pini* on larch, 273.

— — on pine, see Pine.

— — on *Pseudotsuga menziesii*, 854e.

Scleroderma aurantium on *Pseudotsuga menziesii*, forming mycorrhiza, 3611.

— *bovista* on pecan, forming mycorrhiza, USA, 266.

Scleroderris lagerbergii, *Brunchorstia pinea* conidial state, 1808.

— —, Canada, 257c.

*— — on deodar, 2203.

— — on pine, see Pine.

**Sclerophoma pithyophila* on pine, *854c, 2726f, 3034.

— — + *Aureobasidium pullulans* on timber, 590.

Sclerospora graminicola on *Pennisetum typhoides*, 137, 470.

— — on sorghum, 916.

— *macrospora* on rice, 1647.

*— — on wheat, 730.

— *philippensis* on maize, 693, 1359.

— *sacchari* on maize, 3237b.

— — on sugarcane, 693, 2623.

— *sorghii* on maize, 458.

— — on sorghum, see Sorghum.

Sclerotiniaceae, Poland, 1979.

Sclerotinia borealis on *Festuca*, 1690.

— — on grasses, 1691.

— — on *Poa pratensis*, 1690.

— *convoluta*, factors affecting repeated sporulation, 324g.

— — on *Iris*, 2089.

— *draytonii* on *Gladiolus*, 3340.

— *fructicola* as test organism, 3100.

— —, effect of temp. on germinating spores, 3628b.

— —, enzymes of glucose catabolism in, 370.

— —, factors affecting rate of fungicidal action, 3101; spore germination, 3628a; sporulation, 3118.

— — on apricot, 2728j.

— — on fruit trees, 191.

— — on peach, see Peach.

— —, sensitivity to calcium cyanamide, 1553c.

— *fructigena*, dispersal, 2288.

— —, UK, cultural characteristics, 191.

— —, intracellular hyphae, 937.

— —, purification and properties of enzymes, 946.

— *fuckeliana* on grapevine, 811.

— *gladioli* in soil, 2330.

— — on crocus, 3333.

*— — on *Gladiolus*, *1052, 3340.

— *homoeocarpa* on *Agrostis tenuis* and turf, 3355.

[*Sclerotinia*] *laxa*, hosts, 1086.

— —, UK, cultural characteristics, 191.

— — on apricot, 71433, 2902a.

— — on peach, 3388.

— — on plum, 212.

*— — on Rosaceae, 3737.

— —, sensitivity to calcium cyanamide, 1553c.

— — *f. mali*, UK, cultural characteristics, 191.

— *minor*, effect of soil treatment, 2727f.

— — in soil, 2312, 3660.

*— — on carnation, 170.

— — on lettuce, 1529.

— *sclerotiorum*, abnormalities of apothecia, 3139.

— —, changes in carbohydrates during sclerotium formation, 31.

— —, *Coniothyrium minitans* parasitizing, 682, 1981.

— — in soil, 2312.

— —, morpho-physiologic modifications produced by cadmium salts, 947.

— — on bean, 3524.

*— — on carnation, 170.

— — on *Chrysanthemum*, 2087.

— — on *Crambe abyssinica*, 2149.

— — on *Gerbera*, 1051.

— — on potato, 682, 1754b.

*— — on soybean, 2029.

— — on sunflower, *Coniothyrium minitans* parasitizing, 1981.

*— — on tomato, 1568a.

— — on watercress, 330h.

— — producing nonvolatile organic acids, 3644.

— —, *Trichoderma viride* parasitizing, 682.

— *squamosa* on onion, 1524, 2285e.

— *trifoliorum*, changes in soluble carbohydrates during sclerotium formation, 31.

— —, *Mitula sclerotiorum* parasitizing, 506.

— — on clover, 1693, 1694, 3078a.

— *vaccinii-corymbosi* on *Vaccinium*, 1730.

Sclerotium cepivorum, effect of hormones on growth, 2753.

— —, factors affecting germination, 1229b.

— —, hosts, 720.

— — in soil, 2330.

— — on *Allium*, 1229a.

— — on garlic, 1524.

— — on onion, see Onion.

— —, sensitivity to calcium cyanamide, 1553c.

— *delphinii* in soil, 2330.

— *rolfsii*, see *Corticium rolfsii*.

— *tuliparum* in soil, 2330.

Scoleconegetria cucurbitula, hosts, 1496.

Scolytus transmitting *Ceratostysis ulmi*, 2664.

Scopulariopsis brevicaulis on *Ocneria dispar*, USSR, 346.

Sealtex, use on *Hevea* rubber, 2614b.

Secale cereale, see Rye.

**Sechium edule*, *Cercospora citrullina* on, India, 715.

Sedum, *Agrobacterium tumefaciens* on, comparative study, 1891.

Seed health, list of recent literature, 3080.

— — testing, 326, 2282a, 3080; handbook, 3080; international rules, 3080.

Selenophoma donacis, effect of UV light on sporulation, 2282j.

— — on barley, 1870a.

GENERAL INDEX

Selevit against *Cladosporium fulvum*, 2653.
 Selinon against *Agrobacterium tumefaciens* on grapevine, 1446.
Senecio cruentus, see Cineraria.
 — *vulgaris*, cucumber mosaic virus on, UK, cross infection to lettuce, 3555i.
Septoria agrestis and *S. agropyri* on *Agropyron*, 2100.
 — *apiicola* on celery, see Celery.
 — *citri* on citrus, 1024.
 — *gladioli* on *Gladiolus*, 3340.
 — *graminum* on *Agropyron*, 2100.
 — *limonum* on citrus, 1024.
 — *nodorum*, see *Leptosphaeria nodorum*.
 — *petroselini* on parsley, 2257.
 — *pyricola*, *Mycosphaerella sentina* perfect state, 3133.
 — *tritici*, factors affecting sporulation, 2823.
 — on *Agropyron*, 2100.
 — on wheat, see Wheat.
 — *vincae* on *Vinca minor*, 2513.
Sesame (*Sesamum indicum* and *S. orientale*),
Corynespora cassiicola on, control, 2960.
 —, cucumber mosaic virus can infect, 1478.
 —, *Fusarium oxysporum* on, morphological characters, 66.
 —, *Macrophomina phaseoli* on, pycnidial formation, 65.
 — mosaic virus, 2008f.
 —, *Pseudomonas sesami* on, India, 1751, 2389a; eradicating, 2961; symptoms, 2389a.
 *—, *Xanthomonas sesami* on, India (Uttar Pradesh), 493.
Sesbania aculeata, *Pythium aphanidermatum* on, India, 86.
Sesselia pusilla transmitting rice yellow mottle virus, 2850.
Setaria mosaic virus, hosts, 5i.
 — *glauca*, effect of fungi in rhizosphere on seed germination, 48.
 — *italica*, *Pyricularia setariae* on, comparative study, 471.
 —, St. Augustine decline virus on, 1402.
 —, *S. pallidifusca*, *S. tomentosa* and *S. verticillata*, *Uromyces setariae-italicae* on, India, 748.
 — *viridis*, differential host for maize dwarf mosaic virus, 3780.
Sewage, plant pathogens in, 376b.
Shell seed dresser as seed treatment for *Cyamopsis psoraloides*, 1855.
Silene armeria, carnation etched ring virus on, 1538r.
Silicon, effect on sugarcane leaf freckle, 3469.
 Silver nitrate against *Fusarium solani* on *Antirrhinum*, 2880.
Silvinex against vectors of beet yellows virus, 1826.
Simazine, tolerance of maize, 1624.
Sinningia speciosa, see *Gloxinia*.
Sirex noctilio, *Amylostereum areolatum* in symbiosis, 283, 284, 1495.
 — on pine, 876.
Sisal (*Agave sisalana*), *Aspergillus niger* on, Madagascar, 3318.
 —, *Botryodiplodia* and *Colletotrichum agaves* on, Taiwan, control, 1046.
 — diseases, Madagascar, 3318.
 —, *Hormiscium lechlerianum* on, India, 3319.
Sitonia lineatus, control by *Beauveria bassiana*, 2282i.
 — in soil, 3591.
Smuts, see *Ustilaginales*.
 Sodium arsenite against *Sclerotinia fructicola* and toxicity to peach, 2922.
 — carbonate against *Alternaria alternata* on tomato, 2650.
 — chloride injury to *Acer platanoides*, 1160.
 — fluoride as timber preservative, 590.
 —, resistance of wood-destroying fungi, 3039.
 — hydroxide against *Alternaria alternata* on tomato, 2650.
 — hypochlorite against *Aerobacter cloacae* and *Erwinia carotovora* on tomato, 330j.
 — methyl dithiocarbamate as soil treatment, 2413.
 — nitrite against *Venturia inaequalis*, 2725b.
 — pentachlorophenate as timber preservative, 285a, 2692.
 — pentachlorophenol derivative against mushroom dieback, 1538p.
 — phosphate as seed treatment for *Capsicum* and as tool disinfectant, 318.
 —, effect on microflora in rhizosphere of *Eleusine coracana*, 3664.
 — propionate, effect on storage fungi of rice, 2478.
 — salt of levorin against cotton wilt, 158.
 — 2,4,5-trichloro-phenate against *Fusarium oxysporum* f.sp. *gladioli* on *Gladiolus*, 172.
Sogatella longifurcifera transmitting *Eleusine coracana* virus, 2470.
Sogatodes oryzicola transmitting rice hoja blanca virus, 2471.
Soil, actinomycetes in, effect of quintozeno, 380.
 —, *Alternaria brassicicola* in, India, effect of soil fungistasis, 3665.
 —, *Aphanomyces euteiches* in, 602; India, 2696.
 —, *Armillaria mellea* in, effect of methyl bromide, 3661.
 —, *Arthrobotrys drechsleri* in, 348.
 —, *Aspergillus* in, Egypt, 2337a.
 *—, — *anomalus* in, USSR, 1960.
 —, — *flavus* in, India, 1998; effect on penetration of groundnut pods by fungi, 3534; germination of sclerotia, 1998.
 —, — *fumigatus* in, USSR, distribution, 1959.
 —, — *niger* in, India, 1998; USSR, 1959; distribution, 1959; germination of sclerotia, 1998.
 *—, — *parvulus* in, USSR, 1960.
 —, — *terreus* in, USSR, distribution, 1959.
 —, bacteria in, effect of quintozeno, 380; inducing chlamydospore formation in *Fusarium solani* f.sp. *phaseoli*, 2770; inhibiting tobacco mosaic virus on *Datura stramonium* and *Nicotiana glutinosa*, 2019.
 —, bean southern mosaic virus in, root discharge and survival, 1308.
 —, *Botrytis cinerea* in, testing fungicides against, 2312.
 —, — *tulipae* in, testing viability, 2330.
 —, *Cephalosporium gramineum* in, 1611.
 —, *Chaetomium* in, effect of CO_2 and O_2 , 49; isolating, 3125.

GENERAL INDEX

[Soil], *Chrysosporium* in, USSR, 43.
 —, *Cladosporium resinae* in, Australia, France, Sweden, 50.
 —, *Cochliobolus sativus* in, effect of CO_2 and O, 49; electron microscopy, 382b; germination and respiration, 683; viability, 382a.
 —, — *spicifer* in, effect of CO_2 and O, 49.
 —, — *victoriae* in, mechanism of lysis of mycelia, 1966.
 —, *Corticium rolfsii* in, effect of herbicide, 2773; of volatile compounds in lucerne hay, 1066; interaction with *Trichoderma viride*, 52.
 —, — *solani* in, effect of cold storage on damping-off by, 960; of inoculum placement on distribution, 961; factors affecting, 51; effect of fungicides, 3660; persistence of fungicides, 2313; testing fungicides against, 2312.
 —, *Corynebacterium michiganense* in, survival, 3585.
 —, cucumber necrosis virus in, root discharge and survival, 1308.
 —, *Curvularia* in, effect of CO_2 and O, 49.
 —, — *tuberculata* in, India, effect of soil fungistasis, 3665.
 —, *Cylindrocladium scoparium* in, evaluating propagules and isolating, 3126.
 —, *Erwinia* in, movement and survival, 3557c.
 —, — *ruberifaciens* in, isolating and survival, 2737.
 —, factors affecting oxathiin compounds in, 324d; persistence of fungicides, 2313.
 —, fungi, Egypt, 2337b, 2790; India, 3559; Singapore, 3123; USA, 2771, 3657; agricultural, book on, 1957; association with microhabitats, 956; control, 1270, 1575b, 3593k; degrading atrazine, 2772; distribution, 956; ecology in cultivated fields, 684; effect of CO_2 , 381; of fungicides, 3662; of herbicides, 3663; of infection on growth, estimating, 1288; of irradiation on damping-off, 2336; of quintozone, 380; factors affecting, 2337b, 3656, 3657; interrelationship with groundnut, 1523; isolation techniques, 956; labelling, 3685; on *Melilotus alba*, 3559; physiology, 3559; plant volatiles stimulating, 958.
 —, — imperfecti in, USSR, 43.
 —, fungistasis, 680; India, 3559, 3665; USA, 2771; effect on *Ustilago maydis*, 2331; *Verticillium albo-atrum*, 1289; mechanism, 1965; method for indicating, 1291, 2771; sensitivity of spores, 55; volatile factor, 2771.
 —, *Fusarium* in, effect of fungistasis, 55; recovery from wheat rhizosphere and non-rhizosphere, 1968.
 —, — *oxysporum* in, effect of conifer litter on spore germination, 959; of fungicides, 3660; germination of chlamydospores, 2332; serological study of saprophytic str., 1296.
 —, — — f.sp. *asparagi* on, Netherlands, 1538.
 —, — — *callistephi* on, effect of cold storage on damping-off by, 960.
 —, — — *corianderii* in, effect of oilcakes, 1973.
 [Soil, *Fusarium oxysporum* f.sp.] *cucumerinum* in, 1240.
 —, — — *cumini* in, effect of oilcakes, 1973.
 —, — — *elaeidis* on, serological study of saprophytic str., 1298.
 —, — — *vasinfectum* in, effect of conifer litter, 959; of herbicide, 3130; of prometryne, 1969.
 —, — *roseum* f.sp. *cerealis* 'Culmorum' in, factors affecting, 3666.
 —, — *solani* in, effect of conifer litter, 959; lysis of mycelia, 1966.
 —, — f.sp. *phaseoli* in, chlamydospore formation induced by soil bacteria, 2770; effect of conifer litter, 959; substances inducing chlamydospores, 1970.
 —, — — *pisi* in, 602; USA, 2696.
 —, *Glomerella cingulata* in, lysis of mycelia, 1966.
 —, *Macrophomina phaseoli* in, effect of oilcakes, 1973.
 —, micro-organisms, effect of detergents, 3124; of heat treatment, 1292; of mineral fertilizers on cellulose-decomposing, 957; on persistence of fungicides, 2313; electron microscopy, 3684; in vineyards, USSR, 2145; isolating, 44.
 —, *Mortierella* in, USSR, 43.
 —, *Mucor* in, USSR, 43; nutrient media for separation, 1963.
 —, *Ophiobolus graminis* in, factors affecting, 51; growth, 3077b; technique for investigating population, 1333.
 —, *Penicillium* in, Egypt, 2337a; USSR, 43; 2777; nutrient media for separation, 1963.
 —, — *piscarium* in, effect of methyl bromide, 1971.
 —, *Pestalotia macrotricha* in, germination, 680.
 —, *Petunia* asteroid mosaic virus in, root discharge and survival, 1308.
 —, pH in relation to fungistasis, 1291.
 —, *Phytophthora* in, Ceylon, 2163c; USA, 2334; control, 3659; distribution, 2334; effect of fungicides, 2776; isolating, 2333, 2334; from *Hevea* rubber leaf fall areas, 2163c; water potential relations, 3658.
 —, — *cactorum* in, effect of O, 2335.
 —, — *cinnamomi* in, 5j; Netherlands, 1538g; effect of C and N compounds, 1290; isolating, 1538g.
 —, — *drechsleri* in, accumulation of zoospores on roots, 3679.
 —, — *infestans* in, demonstrating accumulation of zoospores on roots, 3679; survival, 3451.
 —, — *megasperma* var. *sojae* in, accumulation of zoospores on roots, 3679; persistence in debris, 1221.
 —, — *syringae* in, associated with brown rot of apple, 1712.
 —, preparing for electron microscopy, 3655.
 —, *Pseudomonas solanacearum* in, USA, vertical distribution, 1261.
 —, *Pyrenopeziza terrestris* in, control, 612.
 —, *Pythium* in, NSW, 2728c; USA, 2334; control, 3659; distribution, 2334; effect of fungicides, 2776; on germination of rye, 124; isolating, 2333, 2334; testing fungicides against, 2312.

[Soil, *Pythium*] *aphanidermatum* and *P. myriotylum* in, effect of temp. on virulence, 3129.

—, — *splendens* in, isolating, 2775.

—, — *ultimum* in, effect of cold storage on damping-off by, 960; isolating 2775.

—, *Rhizoctonia* in, control, 1268.

—, *Sclerotinia* in, control, 1268.

—, — *gladioli* in, testing viability, 2330.

—, — *minor* in, testing fungicides against, 2312; 3660.

—, — *sclerotiorum* in, testing fungicides against, 2312.

—, *Sclerotium cepivorum*, *S. delphinii* and *S. tuliparum* in, viability, 2330.

—, *Sitona lineatus* in, control by *Beauveria bassiana*, 3591.

—, *Sphacelotheca destruens* in, control, 750.

— sterilization, 1575a; against *Fusarium oxysporum* on lily, 1538h; papaw damping-off, 1740a.

—, — apparatus, 679.

—, — by steam, 1235, 1292, 1538h, 1740a, 2608.

—, — by steam-air, 2608.

—, —, effect on *Corticium solani* on potato, 2608; *Fusarium oxysporum* f.sp. *corianderii* on coriander, 2953; soil fungi, 3191.

—, —, see also Soil treatment.

—, streptomycetes in, inhibiting *Glomerella cingulata* and *Mucor ramannianus*, 374.

—, *Synchytrium endobioticum* in, detecting, 1121.

—, *Thielaviopsis* in, control, 1268.

—, — *basicola* in, effect of amendments, 1972; survival of endoconidia, 3127; testing fungicides against, 2312.

—, tobacco mosaic virus in, USA, 3416; root discharge and survival, 1308.

—, — necrosis virus in, effect of DD, 1538l; root discharge and survival, 1308; transmission by vectors, 1308, 1538l.

—, — rattle virus in, effect of DD and transmission by vectors, 1538l.

—, tomato bushy stunt virus in, root discharge and survival, 1308.

— treatment, 1575a; against *Aphanomyces euteiches* on pea, 293; *Armillaria mellea* on apple, 1426; *Cephalosporium gramineum* on wheat, 1611; *Cercosporaella herpotrichoides* on wheat, 3210; *Cladosporium fulvum*, 909i; *Corticium solani* on bean, 3600; on *Euphorbia pulcherrima*, 2886; on *Phaseolus mungo*, 3600; on pine, 1167; on radish, 3600; cucumber soil rot, 3543; damping-off of cauliflower, 1317; citrus, 479; pine, 16b; tomato, 1317, 1784; *Deuterophoma tracheiphila* on orange, 2482; *Erysiphe graminis* on wheat, 2042; *E. polygoni* on cowpea, 3057; fungi on wheat straw, 2828; *Fusarium oxysporum* on lily, 1538h; on *Pseudotsuga menziesii*, 1178; *Fusarium oxysporum* f.sp. *lycopersici*, 2183; on tomato and watermelon, 3749; *F. solani* f.sp. *pisi* on pea, 895; *Helminthosporium solani* on potato, 1123; hop-leaf curl, 2575; hop nettlehead, 2576;

Marssonina brunnea on poplar, 269; *Oidium* on *Antirrhinum*, 2879; *Ophiobolus graminis* on wheat, 1334; peach decline, 2027c; *Phomopsis sclerotoides* on cucumber, 2266, 2282k; *Phytophthora cactorum* on strawberry, 2727a, 2933; *P. cryptogea* on *Gerbera*, 3338; *P. fragariae*, 2307v; *P. palmivora* on black pepper, 3563a; *Plasmopiphora brassicae* on *Cruciferae*, 2728g; *Podosphaera leucotricha*, 2105; *Poria hypolateritia* on tea, 245; *Pythium aphanidermatum* on chrysanthemum, 1678; *P. ultimum* on pea, 895; on *Euphorbia pulcherrima*, 2886; *Sclerotinia sclerotiorum* on *Gerbera*, 1051; *Sclerotium cepivorum* on onion, 1538e; *Sphaerotheca fuliginea* on cantaloupe, 626; on cucumber, 2263 2308b; tea diseases, 2170b; *Thielaviopsis basicola* on *Antirrhinum*, 2879; on *Euphorbia pulcherrima*, 2886, 3336; on tobacco, 2176; *Trichodorus*, 1538l; *Verticillium* on cotton, 1657; on tomato, 92; *V. albo-atrum* on *Gerbera*, 3338; on potato, 2162; on tomato, 909i, 2308b; *V. dahliae* on cotton, 2867; on *Euphorbia pulcherrima*, 3335; on *Gerbera*, 3338; on soybean, 1522; wheat spindle streak mosaic virus, 2413.

[Soil treatment], effect on *Pyrenopeziza lycopersici* on tomato, 2655; on cereal foot and root pathogens, 2307j; on fungi, 2727l.

— ineffective against *Phytophthora infestans* on potato, 234.

— with basamid, 1167; Bayer 2255, 2307v; benlate, 2183, 2867, 2886, 3210; benomyl, 107, 909i, 2042, 2105, 2162, 2176, 2263, 2266, 2308b, 2482, 2879, 3057, 3336, 3749; brassicol, 1317; captan, 1678, 3543; captan 50, 1784; carbathion, 1522, 1657; carboxine, 3600; chevron PP675, 626; chloropicrin, 895, 1178, 1538h, 1611, 2828; COBH, 1167; creosote, 1426; cuprosan, 1784; 1,3-D, 895; dazomet, 2828, 3563a; D.C.T., 107; DD, 1178, 1538l, 2828; dexon, 293, 2027c, 2886; dichloran, 1538e; dichloropropene, 895; difoloran and dithane C90, 2728g; dithane M45, 269; DNOC, 1334; enovit, 2183; flit, 1317; formaldehyde, 16b, 750, 998, 1426, 2307j, 2828, 3335; heat, 2413; methylarsinsulphide, 1167; methyl bromide, 245, 479, 1178, 1971, 2266, 2282k, 2655, 2727o, 2933, 3338; plantvax, 107; quintozone, 1123, 1334; steam, 2266; terabol, 1167; terraclor, 3543; terrazole, 2886; thiram, 1678; tillex, 3563a; trizone, 2027c; vapam, 479, 1167, 3563a; vitavax, 107; zinc sulphate, 2575, 2576; zineb, 1167.

—, —, see also Soil sterilization.

—, *Trichoderma* in, USSR, 43; effect of methyl bromide, 1971; of volatile substances from lucerne, 53; factors affecting, 51.

—, — *koningii* in, 1291.

—, — *viride* in, antagonism to micro-organisms, 681; germination, 680; interaction with *Corticium rolfsii*, 52.

—, *Trichometasphaeria pedicellata* in, germination and respiration, 683.

[Soil], *Ustilago maydis* in, soil fungistasis against, 2331.
 —, — *scitaminea* in, viability, 549.
 —, *Verticillium albo-atrum* in, estimating propagules, 46; germination, 680, 1289.
 —, *Verticillium dahliae* in, effect of volatile substances from lucerne hay, 1067.
 —, wheat spindle streak mosaic virus in, control and factors affecting, 2413.
 Solanaceae as indicators for potato virus S, 2593.
 —, *Colletotrichum coccodes* on, Lebanon, 716.
 —, *Leveillula taurica* on, Rumania, 1321.
 —, local lesion hosts for potato virus A, 3441.
 —, potato virus X on, multiplication, 3711.
 —, *Pyrenophaeta lycopersici* and *Thielaviopsis basicola* on, Lebanon, 716.
 —, tobacco mosaic virus on, multiplication, 3711.
 —, — veinbanding mosaic virus on, 1561.
Solanum, potato virus Y on, resistance, 2969.
 — *argentinum*, tobacco mosaic virus on, Argentina, 844.
 — *aviculariae* diseases, 814.
 — *gilo*, *Verticillium dahliae* on, var. react., 1535.
 — *melongena*, see Eggplant.
 — *phureja*, *Pseudomonas solanacearum* on, resistance of clones, 1766.
 Solusanigran as seed treatment for rice, 1372.
Sonchus oleraceus, see Sowthistle.
 SOPP, effect on *Penicillium digitatum* on orange, 3283.
 *Sorghum (*Sorghum vulgare*), *Acrospeira fluctuata* on, India, 746.
 —, *Aspergillus* on stored, India, 468.
 —, *Colletotrichum graminicola* on, pigment, 1928.
 —, *Curvularia* on stored, India, 468.
 —, — *tuberculata* on seed, India, 2848.
 —, fungi on stored seed, effect on germination, 2469.
 —, *Fusarium roseum* on, Yugoslavia, hosts, 1362; pigment, 1928; symptoms, 1362.
 —, — f.sp. *cerealis* on, 328b.
 —, *Gloeocercospora* on stored, India, 468.
 —, *Gibberella fujikuroi* on, 328b.
 —, *Helminthosporium* on stored, India, 468.
 —, *Macrophomina phaseoli* on, Thailand, pycnidial state, 2849.
 —, maize dwarf mosaic virus on, pathological histology, 458.
 —, — — — str. A & B on, 3788.
 —, Manhattan leaf spot, USA, non-pathogenic, 469.
 —, mould fungi on, effect on viability, 747.
 —, *Periconia circinata* on, toxin, 1633.
 —, *Puccinia purpurea* on, Canary Islands, 3184.
 —, red pigment, 553.
 —, *Rhizopus* on stored, India, 468.
 —, *Sclerospora graminicola* on, var. react., 916.
 —, — *sorghii* on, Argentina, 467; USA, 3251; control, 3251; inoculating, 3790; pathological histology, 458; spread, 3251; transmission by seed, 744.
 —, *Sphacelotheca cruenta* on, control, 1361; germination of chlamydospores, 2468a, b.
 [Soil, *Sphacelotheca*] *sorghii* on, Ghana, 3255; India, 2056, 2467; factors affecting, 3255; losses, 3255; physiologic races, 2467; var. react., 3255.
 —, sugarcane mosaic virus on, 2049; local lesion host, 2980; str., 919d; transmission by soil, 3174.
 —, — red stripe disease can infect, 2625.
 —, *Tolyposporium penicillariae* on, control, 916.
 —, *Trichometasphaeria turcica* on, increasing inoculum, 745; physiologic races, 3789.
 —, *X*Sudan grass, maize dwarf mosaic virus on, effect on, 3250.
 — *bicolor*, *Colletotrichum graminicola* on, incidence, 2057.
 —, maize dwarf mosaic virus on, local lesion assay, 1010.
 —, — *Sclerospora philippinensis* on, 1360.
 —, — *Sphacelotheca reiliana* on, histopathology, 3254.
 —, —, sugarcane mosaic virus on, local lesion host, 2980.
 — *halepense*, maize dwarf mosaic virus on, 3250; reservoir of infection from, 3238.
 —, — *Trichometasphaeria turcica* on, physiologic races, 3789.
 — *propinquum*, *Sclerospora philippinensis* on, 1360.
 — *sudanense*, see Sudan grass.
 — *vulgare*, see Sorghum.
Sorosporium consanguineum on *Aristida*, 1058.
 — *penniseti* on *Cenchrus ciliaris*, 637b.
 Sowbane (*Chenopodium hybridum*) mosaic virus, effect of organic Hg compounds, 3693; of oxidized phenols, 3714.
 — — — on grapevine, 2142.
 *Sowthistle (*Sonchus oleraceus*) yellow vein virus on sowthistle, UK, 81; incubation period and transmission by vectors, 3723.
Soybean (*Glycine max*), *Aspergillus flavus* on, India, introduced from Taiwan, 3055.
 —, bean pod mottle virus on, USA, 3053; comparison of str., 3084h; effect on yield, 3053; transmission mechanically, 1847; by vectors, 3084h.
 —, — — — + soybean mosaic viruses on, effect on nodulation, 2707; on seed yield and quality, 1218; factors affecting, 2707.
 —, boron toxicity in, Iran, 3735b.
 —, *Cephalosporium gregatum* on, sporulation and spore germination, 1222.
 —, *Colletotrichum truncatum* on, India, introduced from Taiwan, 3055.
 —, *Desmodium paniculatum* virus can infect, 3084e.
 —, diseases, NZ, 2237.
 —, dwarf virus on soybean, Japan, symptoms and transmission, 1220.
 —, groundnut mottle virus can infect, 2286b.
 —, *Macrophomina phaseoli* on, formation of sclerotia, 607; pathogenicity, 1576.
 —, mosaic virus on soybean, 2237; Siberia (E.), 1219; control, 1219; effect on nodulation and consequences, 2707; on seed, 3528; free amino acids in relation to, 3529; identifying, 3054; leaf rugosity, 3528; translocation, 79; transmission by sap, 3528; var. react., 1219.

[Soybean mosaic virus]+bean pod mottle virus on soybean, effect on nodulation and consequences, 2707; on seed yield and quality, 1218; free amino acids in relation to, 3529.

— +tobacco ringspot virus on soybean 51.

— — mild and severe str. on soybean, transmission, 1847.

—, *Myrothecium roridum* on, India, introduced from USA, 3055.

—, pea enation mosaic virus can infect, 292.

—, *Peronospora manshurica* on, Colombia, 1521; *NZ, 2237; control, 1521; germination and viability of oospores, 2238.

—, phytoalexin production in, 331q.

—, *Phytophthora megasperma* on, 504.

—, — var. *sojae* on, effect of root substances, 1848; of temp., 2239; phytoalexin production, 2240.

—, *Pseudomonas glycinea* on, Guyana, 3560d; *NZ, introduced from abroad, 2241; detection and distribution, 1223; factors affecting, 3095; relationship to systemic toxemia, 1851; symptoms, 2241.

—, — +*Xanthomonas phaseoli* var. *sojense* on, detecting, 304.

*—, *Pseudoperonospora manshurica* on, Thailand, 2390a.

*—, *Sclerotinia sclerotiorum* on, USA (Arizona), 2029.

—, seedborne fungi on, control, 2708.

—, seed diseases, control, 3755.

—, tobacco ringspot virus and soybean mosaic viruses on, 51.

*—, — streak virus on, USA, hosts and properties, 3530.

—, *Verticillium dahliae* on, USSR, 1522.

—, *Xanthomonas phaseoli* var. *sojense*+*Pseudomonas glycinea* on, detecting, 304.

—, straw, *Cephalosporium gregatum* on, growth and sporulation, 1850.

Spathoglottis plicata, *Tulasnella calospora* on, forming mycorrhiza, 3618.

Spermopora bromivora, NZ, 3183.

— *subulata*, Germany (N.), hosts, 1056.

Sphacelia sorghi on maize, 328a.

— — on *Pennisetum orientale*×*P. typhoides*, 3252.

Sphaceloma perseae on avocado pear, 2140.

— *punicae* on pomegranate, 2945.

Sphacelotheca cruenta on sorghum, 1361, 2468a, b.

— *destruens*, effect of *Penicillium*, 3107.

— — in soil, 750.

— — on maize, 2458.

— — on *Panicum miliaceum*, 750.

— *reiliiana* on *Sorghum bicolor*, 3254.

— —×*S. sorghi*, genetics, 3253.

— *sorghi* on sorghum, 2056, 2467, 3255.

— —×*S. reiliiana*, genetics, 3253.

— *tanglinensis*, teliospore germination and compatibility groups, 1992.

Sphaerella ceres on *Festuca* and *Lolium*, 635e.

Sphaeropsidales, India, 61; USSR, 58.

Sphaeropsis necatrix, *Diplodia pinea* identical, 278.

Sphaerotheca fugax in USSR, 3186.

— *fuliginea*, geographical distribution and host range, 2344.

[*Sphaerotheca fuliginea*] on bean, 1845.

— — on cantaloupe, 626.

— — on cucumber, 2263, 2308b, 3069.

?— — on melon, 2718.

— — on watermelon, 3070.

*— *fusca* on *cineraria*, 3081.

— *humuli*, see *S. macularis*.

— *macularis*, electron microscopy, 3677.

— — on hop, 1747.

— — on papaw, 1740a.

— — on strawberry, 2931, 3079c.

— *mors-uvae* on currant, see *Currant*.

— — on gooseberry, 1731.

— *pannosa* on peach, 518, 2551.

— — on rose, see *Rose*.

— — var. *persicae* on peach, 1090, 1417.

— — — *rosae* on rose, 2094.

Spicaria farinosa on *Ocneria dispar*, USSR, 346.

Spilocephala eriobotryae on loquat, 911, *2138.

Spinach (*Spinacia oleracea*), *Cochliobolus miyabeanus* on, 141.

—, *Colletotrichum spinaciae* can infect, 3555g.

—, fungi on, Poland, 291.

— leaf necrosis, USA, 2220.

—, parsnip mosaic virus on, 1857.

—, tobacco rattle virus can infect, 3321.

Spinacia oleracea, see *Spinach*.

Spongospora subterranea not associated with potato mop-top virus, 3077f.

— — on potato, 2284, 2726b.

— — transmitting viruses, 1307.

— — f.sp. *nasturtii* on watercress, 330h.

Sporidesmium cladosporii on poplar and *Salix*, 3020.

Sporobolomyces roseus on barley, stored, 1346.

Sporotrichum destructor on *Eucalyptus ficifolia*, 3015.

Spraying apparatus, 929, 1652, 1754e, 1774b, 1905, 2178, 2274, 2570, 3079b, 3292.

Spritzcupral against *Pseudomonas lachrymans* on cucumber, 3544.

Spruce (*Picea*), *Armillaria mellea* on, Germany (W.), 585; infection and mode of entry, 2681; not producing mycorrhiza, 662.

—, Ascomyces and Basidiomycetes on, Germany (W.), 585.

— bud disease, ?caused by imperfect state of *Cucurbitaria piceae*, 2282d.

—, *Coryne sarcoidea* on, Germany (W.), 585.

—, *Fomes annosus* on, Germany (W.), 585; effect of *Boletus bovinus*, 3025; of root exudates on growth, 3026; factors affecting decomposition, 3498; mode of entry, 2681.

—, fungi on, forming mycorrhiza, 3611.

—, — imperfecti on, Germany (W.), 585.

—, *Gemmamyces piceae* on, 1164.

— mycorrhiza, effect on nutrient uptake, 1911.

—, *Nectria cucurbitula* on, Germany (W.), 585.

—, — *fuckeliana* on, Canada, pathogenicity, 1496.

—, *Polyporus tomentosus* on, Canada, historical review, 878.

—, *Polystictus abietinus* on, Germany (W.), 585.

*[Spruce], *Pseudophacidium piceae* on, Canada, pathogenicity, 1497.
 —, *Scoleconectria cucurbitula* on, Canada, pathogenicity, 1496.
 —, *Stereum areolatum* and *S. sanguinolentum* on, Germany (W.), 585.
 *—, *Thekopsora sparsa* on, Canada, aecial state of *Pucciniastrum sparsum*, morphology, 3499.
 —, *Thelephora terrestris* on, forming mycorrhiza, 3112.
 —, virus-like particles found in, 2189i.
 Squash (*Cucurbita maxima*), cucumber mosaic virus on, symptoms, 312.
 —, *Erysiphe cichoracearum* on, control, 313, 1239.
 —, *Hypomyces solani* f.sp. *cucurbitae*, uptake of 3-o-methylglucose by, 1860.
 — mosaic virus, electron microscopy and purification, 1237.
 — — — on *Cucurbitaceae*, 622.
 — — — on squash, symptoms, 312.
 —, prune dwarf virus on, indicator for, 3383.
 —, *Pseudomonas syringae* on, symptoms, 2299.
 —, tobacco ringspot virus on, symptoms, 312
 —, watermelon mosaic virus on, Qd, electron microscopy, 622; symptoms, 312; transmission by vectors, 622.
Stachybotrys atra, growth and spore germination, 3631.
 — — — on *Heracleum sphondylium* and *Urtica dioica*, 3640.
Stagonospora curtisi on *Narcissus*, 909g.
 — *meliloti* on clover, 1059.
 *— *sacchari* on sugarcane, 2618e.
Staphylococcus aureus, antibiotic activity of basidiomycetes against, 3607b.
Statice, see *Limonium*.
Steam treatment of soil, 2266, 3338.
 —/air treatment against tobacco mosaic virus on tomato, 252.
 — — — of soil, 2608.
Steganozopium bubakianum on *Kochia prostrata*, 496.
Stellaria media, cucumber mosaic virus on, UK, source of infection for lettuce, 3555i; transmission by seed, 2261.
Stemphylium botryosum on lucerne, 1065b.
 — *loti*, effect of ozone on germination, 671.
 — — — longevity and pathogenicity of stored, 3682.
 — — — on *Lotus corniculatus*, 2102.
 — — — on lucerne, 2521.
 — *radicum* on carrot, 1527, 3555d.
 *— — — on celery, 1569a.
 — — —, pectic and cellulolytic enzymes, 670.
 — *sarciniforme*, effect of ozone on germination, 671.
 — — — on clover, 635e.
 — *solani* on *Capsicum*, 319.
 — — — on tomato, 3005.
Stenotaphrum secundatum, St. Augustine decline virus on, USA, hosts, 1402.
 *— —, *Sclerospora* on, USA, symptoms, 1687.
 — — —, sugarcane mosaic virus on, USA, 919d.
Stereum areolatum on spruce, 585.
 — — — on timber, 1181.
 — *hirsutum* on timber, 285c.
 — — — on trees and shrubs, 1156.
 — *purpureum* on fruit trees, 2527.
 [*Stereum purpureum*] on poplar, 2669.
 — — — on trees and shrubs, 1156.
 — *sanguinolentum* on pine, 1809.
 — — — on *Pseudotsuga menziesii*, 1813.
 — — — on spruce, 585.
Stipa tortilis, *Tuberinia corsica* on, W. Mediterranean, 2342.
 **Stizolobium deerianum*, *Cercospora canescens* and *C. stizolobii* on, NSW, 3738.
Stolbur in relation to lavender wilt, 497.
 —, notes on, 3172.
 — on *Capsicum*, see *Capsicum*.
 — on potato, 1113, 1305, 2599.
 — on tobacco, 354, 712, 2599.
 — on tomato, see *Tomato*.
 — C & SM, hosts and mycoplasma-like bodies in, 1315.
 — P, new, on tomato, 3480.
Stone fruit, *Agrobacterium radiobacter* and *A. tumefaciens* on, S. Australia, transfer of virulence between isolates, 345.
 — — —, *Blumeriella jaapii* on, USSR, 2921.
 — — —, *Ceratocystis fimbriata* on, USA, insects in relation to, 211.
 — — —, *Monilinia* on, causing postharvest decay, 2119.
 — — —, peach rosette virus complex on, NZ, 2918.
 — — —, plum pox virus on, Czechoslovakia, 1428.
 — — —, *Prunus* necrotic ringspot virus mild and severe strs. on, 2522n.
 — — —, *Rhizopus* on, causing post harvest decay, 2119.
 — — —, *Valsa cincta* and *V. persoonii* on, USSR, 1089.
 — — — virus diseases, 2522v; Poland, incidence, 1537a; nematode-transmitted, study of, 3384.
Storage disorders of apple, see *Apple*; of barley, 1346, 1347, 2835a, b; cereals, 1586; citrus, 220, 330k, l, 3282; cranberry, 2555; lemon, 3282; maize, 324j, 2843; pear, 1711, 3381; rice, 2478, 3258; sorghum, 2469; strawberry, 2935; sunflower, 1104; tropical fruits, 220; yam, 3552.
Strasseriopsis tsugae proposed as new name for *Phellostroma tsugae*, 3031.
Strawberry (*Fragaria vesca*), *Arabis* mosaic virus on, 633.
 —, *Aspergillus fisheri* var. *glaber* on canned, survival and thermotolerance, 2936.
 —, *Botrytis* on, UK, 2308j.
 —, — *cinerea* on, Germany (E.), 2284; causing post harvest decay, 2132; control, 802, 1734, 2132, 2133, 2285f, i, 2307u, 2725j, 3079c; factors affecting, 1436; var. react., 2285t.
 —, — *Chaetosphaeronema* on, USA, 1096.
 — crinkle virus on strawberry, NSW, notes on, 1094; effect on chemical contents, 3398.
 —, *Dendrophoma* on, USA, 1096.
 —, *Diplocarpon earlianum* on, isolating, 1437.
 — diseases, control, 1547.
 — disorder, Irish Repub., ?soil-borne viruses causing, 3558d.
 —, *Erysiphe* on, control, 2308e.

GENERAL INDEX

[Strawberry], fungi on, USA, sporulation, 1096; bi-monthly changes in, 3084d.

— green petal virus on strawberry, France, mycoplasma-like bodies in, 2930.

—, grey sterile fungus on, identity, 1095.

—, *Humicola grisea* on, USA, 1096.

— latent ringspot virus, hosts, 1158, 2367.

— — — on *Asparagus*, 633.

— — — on celery, 1858.

— — — on *Chenopodium amaranthoides*, 3154.

— — — on fruit, 785.

— — — on peach, 2523f.

— — — on stone fruit, 3384.

— — — on strawberry, 633.

— — —, tubular inclusion bodies in hosts, 3153.

— mild yellow edge virus on strawberry, NSW, notes on, 1094.

— mottle virus and latent A viruses on strawberry, effect on yield and var. react., 2929.

*—, *Mycosphaerella fragariae* on, Nigeria, 1570.

*— necrotic shock virus on strawberry, USA (Ore & Wash.), 216.

—, *Phytophthora cactorum* on, Belgium, 2933; France, 1; control, 2727a, 2933.

—, — *fragariae* on, Belgium, 190d; causing stelar reddening, 801; control, 2307v, w; resistance and var. react., 3557a.

— pollen, effect of captan on, 1735, 2561.

—, *Pythium* on, USA, 2131.

—, — *sylvaticum* on roots, penetration, 2934.

—, *Rhizoctonia fragariae* on, Italy, 1733.

—, *Rhizopus stolonifer* on, causing post harvest decay, 2132.

—, *Sphaerotheca macularis* on, control, 2931, 3079c.

— storage disorders, USA, 2935.

—, *Tetralodium marchalianum* and *Trichocladium opacum* on, USA, factors affecting sporulation, 1096.

*—, *Verticillium* on, *N. Ireland, 2726d; control, 3079c.

—, — *dahliae* on, control, 2725j, 2932; effect on and factors affecting, 1438; transmission by stolon, 1903; var. react., 1438.

— virus complex, NSW, control, 1575d.

— disease, *Olpidium* associated with, 1732.

— diseases, Russian manual, 3397.

Strelitzia reginae, *Pseudomonas* on, pathogenicity and symptoms, 3084e.

Streptocycline against *Xanthomonas oryzae* on rice, 2473.

— effect on *X. oryzicola* on rice, 2854.

Streptomyces griseoplanus, antibiotic produced by, 3108.

— *scabies*, cellulolytic and pectolytic activity 3654.

— on potato, see Potato.

Streptomycin against *Pseudomonas pisi* on pea, 2697.

— effect on *Fusarium roseum* f.sp. *cerealis* 'culmorum' in soil, 3666; *Sphaerotheca pannosa* on rose, 2095; *Venturia inaequalis*, 3608.

[*Streptomycin*] residues in pear, 2917.

—, resistance of *Erwinia carotovora* and *Pseudomonas lapsa*, 3787.

— sulphate against *Corynebacterium michiganense* on tomato, 1787.

Stropharia cubensis, antibacterial activity of mycelia, 3607b.

Succinic acid as seed treatment for onion, 614.

Sucrose, effect on growth of *Pyrenophaeta dolichi* on *Dolichos biflorus*, 3058.

Sudan grass (*Sorghum sudanense*), *Trichometasphaeria turcica* on, physiologic races, 3789.

Sugar beet, see Beet.

Sugarcane (*Saccharum officinarum*), boron deficiency and toxicity in, symptoms, 2627.

—, *Ceratocystis adiposum* on, producing ethyl acetate, 550.

—, — *paradoxa* on, control, 242; detecting in soil, 833; producing ethyl acetate, 550.

*—, *Cercospora koepkei* on, *Réunion, 917a; Singapore, 714.

— chlorotic streak virus on sugarcane, Qd, 1128b, 3462; Réunion, 917a; factors affecting, 1128b.

—, *Cochliobolus lunatus* on, India, morphology and pathogenicity, 2169.

— diseases, Argentina, 1249; Ghana, 88; Jamaica, 551; Nepal, 546; testing for resistance, 1249.

—, *Drechslera sacchari* on, Réunion, 917a.

— Fiji disease virus on sugarcane, Qd, 1128a.

—, fungi in rhizosphere, Jamaica, 1768.

—, *Gibberella fujikuroi* on, 545; *Mozambique, imported from abroad, 2624; pigment, 1928.

—, *Glomerella tucumanensis* on, 1471; Burma, 2982; India, 1127, 1472, 2621, 3467; Pakistan (E.), 1471; Qd, 1128c; causing laminar spots on leaves, 3467; control, 3466; effect on, 1472, 2621; factors affecting, 2622, 2982; method for detecting, 2983; physiologic races and resistance, 1127; review, 1471; virulence, 1128c.

— grassy shoot virus on sugarcane, India, 1127, 1470, 3461; control and losses, 1127; metabolic changes in, 2168; transmission by vectors, 1470; var. react., 3461.

—, S. Africa, assessing and identifying vars, illustrated publ., 2979.

— leaf freckle, Hawaii, 3469.

—, *Leptosphaeria sacchari*, India, 1767.

*—, *Marasmiellus inoderma* on, Egypt, causing root rot, 2466.

— mosaic virus on *Eleusine coracana*, 3257.

— — — on maize, 919d, 2049, 2452.

— — — on *Pennisetum purpureum*, 547.

— — — on sorghum, 2049, 3174.

— — — on *Stenotaphrum secundatum*, 919d.

— — — on sugarcane, 545, 2049; India, 1127, 1470; Nepal, 546; Qd, 3462; USA, 919d; control, 3462; effect on, 1127; hosts, 1470; losses, 1127, 3462; particle length, str. and vectors, 1470.

— — — str. E, local lesion host, 2980.

— — — str. A, B, D, E, & H on sorghum, 919d.

— — — Johnston grass str. on maize, 1011, 2050.

GENERAL INDEX

[Sugarcane] nitrogen deficiency, Puerto Rico, pesticides causing, 2984.

—, *Pleocysta sacchari* on, pigment, 1928.

—, *Pseudococcus sacchari* on, control by *Aspergillus*, 3592.

—, *Pseudomonas rubrilineans* on, Nepal, 546

—, — *rubrisubalbicans* on, ?causing red stripe disease, 2625.

— ratoen stunting virus on sugarcane, India, 1127; Qd, 2620, 3463; Taiwan, 1129; control, 3463; effect on growth, 331b; factors affecting, 2620; localization in plant, 3464; losses, 2620, 3463; spread by mechanical harvesters, 2620; transmission, 1127; mechanically, 3464; var. react, 1129, 3463.

—, red pigment development, 553.

— — stripe disease, USA, historical review, ?*Pseudomonas rubrisubalbicans* or *Xanthomonas floridana* causing, 2625.

—, *Sclerospora sacchari* on, sporulation, 2623; symptoms, 693.

—, *Selenophoma* and **Stagonospora sacchari* on, S. Africa, 2618d, e.

— stem rot, unknown fungus causing, *Trichoderma viride* hyper-parasitising, *Hypocrea rufa* perfect state, 552.

— streak virus on sugarcane, S. Africa, effect of heat treatment and description, 2618c, 2619.

— striate mosaic virus on sugarcane, Qd, non-transmission by soil, 1128d.

—, *Ustilago scitaminea* on, 545; *Cambodia, 3732; India, 243, 1127, 2621; *Nigeria, 1576; S. Africa, 2618b; Sudan, 1474; effect on, 2621; factors affecting spore germination, 2981; morphological variation of spores, 243; resistance, 1127; var. react., 1473, 2618b

— white leaf disease, Taiwan, symptoms and transmission, 1130, 1131; control, 832; mycoplasma causing, 548, 832, 3465.

—, *Xanthomonas albilineans* on, Barbados introduced from Guyana, 3564a; Guyana, 3560e; Qd, notes on, 3468; Réunion, 917a; S. Africa, *554, 2618a, b; *Swaziland, 554.

—, — *floridana* on, ?causing red stripe disease, 2625.

—, — *vasculorum* on, Réunion, 917a.

— yellow wilt, East Africa, 2626, 2985; Malawi, 555; conference, 2985; factors affecting, 555, 2626.

Sulphite alcohol malt concentrate as seed treatment for cereals, 1583.

— in plant virus inoculations, 1560.

Sulphur against *Erwinia amylovora* on apple, 2537; *Erysiphe graminis* on cereals, 1584; *Oidium euonymi-japonica* on *Euonymus japonicus*, 1397; *Oidium heveae* on *Hevea* rubber, 831, 2165b, 2615; papaw diseases, 1740a, 3410; potato tuber diseases, 2726b; *Sphaerotheca mors-uvae* on currant, 2559; *S. pannosa* on peach, 2551.

— ineffective against *Oidium heveae* on *Hevea* rubber, 2163a.

—, colloidal, against *Leveillula taurica* on tomato, 1487; *Podosphaera leucotricha*, 789, 1079, 2310, 2533; *Pseudopeziza ribis* on currant, 2925; *Sphaerotheca pannosa* var. *persicae* on peach, 1090; *Uncinula necator*, 810.

[Sulphur] dioxide injury to crops, 2401.

—, wettable, against *Sphaerotheca pannosa* and *S. p. var. persicae* on peach, 1090, 2551.

—, —, effect on fruit set of apple, 2535.

—, —, use on apricot, 1433.

Sulphuric acid as seed treatment for cotton, 161.

—, effect on actinomycetes in cotton rhizosphere, 161.

Sunflower (*Helianthus annuus*), *Alternaria* on, Yugoslavia, ?new var., similar to *A. leucanthemi*, 3428.

—, apparatus for seed treatment, 1574.

—, *Ascochyta comositarum* on, symptoms, 1105.

—, *Aspergillus glaucus* on, factors affecting, 1104.

— curl mosaic, aphids associated with, 3427.

—, *Erwinia carotovora* on, USSR, 2964.

*—, *Macrophomina phaseoli* on, *Hungary, 2962; factors affecting, 1576; pathogenesis, 3429.

—, *Plasmopara halstedii* on, zoosporangial germination, 2963.

—, *Puccinia helianthi* on, genetics of pathogenicity and resistance, 3430a, b.

—, *Sclerotinia sclerotiorum* on, Hungary, *Coniothyrium minitans* parasitizing, 1981.

— storage disorders, factors affecting, 1104.

—, *Verticillium albo-atrum* on, hosts and virulence, 534.

Sunn-hemp mosaic virus on *Crotalaria juncea*, 3719.

Swede (*Brassica napobrassica*), *Bremia lactucae*, *Erysiphe polygoni* and *Fusarium oxysporum* f.sp. *pisi* on, var. react., 3078a.

Sweet corn, see Maize.

— pea (*Lathyrus odoratus*), alfalfa mosaic virus on, transmission by vectors, 1306.

—, —, pea enation mosaic virus can infect, 292.

—, —, — streak virus on, transmission by vectors, 1306.

*— potato (*Pomoea batatas*), *Botryodiplodia tubericola* on, Iran, 1320.

—, —, *Ceratocystis fimbriata* on, 1866; differentiation of str., 2281; ethylene production in relation to, 1528; producing compounds in root tissue, 1246.

—, —, *Diplodia* can infect, 2121.

—, —, *Fusarium oxysporum* f.sp. *batatas* on, genetics of resistance, 320.

—, — internal cork and little leaf viruses on sweet potato, Tonga, 1864.

—, —, *Plenodomus destruens* on, screening fungicides against, 3551.

—, — russet crack virus on sweet potato, Tonga, 1864.

—, — virus causing chlorotic spots and vein banding, transmission, 3565f.

—, — witches broom disease, association of mycoplasma-like bodies with, 3565f.

—, —, — virus, Ryukyu Island, transmission by vectors, 1865.

SWF 790 as seed treatment for barley, 3225.

Swietenia macrophylla and *S. mahagoni* canker, Trinidad & Tobago, ?virus causing, 2657.

Syodium polyspora, CMI description, 2338.

Symposia, see Conferences & Reports.

Synchytrium endobioticum in soil, 1121.
 — — on potato, see Potato.
 — — transmitting virus diseases, 1307.
Syngonium podophyllum bacterial leaf blight, USA, resembling *Xanthomonas vitians*, symptoms, 5g.
Syringa vulgaris, see Lilac.
Syzygites megalocarpus on mushroom, 1869.

**Tabernaemontana coronaria* and *T. heyneana*, *Alternaria alternata* on, India, causing leaf shot-hole, 3351.
Tafasan 6W against *Sphacelotheca cruenta* on sorghum, 1361.
**Tagetes erecta*, *Fusarium oxysporum* f.sp. *callistephi* on, Malaya and Singapore, symptoms, 1684.
 Tangerine, see Orange.
Tangor (*Citrus* hybrid), N and K deficiency in, 330b.
 Tannin toxicity to *Phytophthora infestans*, 2975.
**Taphrina flectens* on cherry, 257f.
 — *maculans* on turmeric, 694.
 — *populina* on poplar, see Poplar.
 Tar against *Fomes lignosus* on *Hevea* rubber, 2167.
 — acid against *Ceratocystis fimbriata* on *Hevea* rubber, 831.
Tarichium gammae on *Pieris brassicae*, 347.
Taxus baccata, see Yew.
 TBZ against *Colletotrichum musae* and *Gibberella fujikuroi* on banana, 1439; *Fusarium oxysporum* f.sp. *gladioli* on iris, 2505; *F. o.* f.sp. *narcissi* on *Narcissus*, 3343; *Penicillium digitatum* and *P. italicum* on orange, 2861; *Thielaviopsis basicola* on bean, 1972; as seed treatment for cotton, 1040; pea, 3048.
 —, effect on *Penicillium digitatum* on orange 3283.
 — 60W ineffective against *Verticillium albo-atrum* on *Chrysanthemum*, 2087.
 —, see also Thiabendazole.
 TCNB against *Sclerotinia trifoliorum* on clover, 1694.
 Tea (*Camellia sinensis*), *Cephaeluros parasiticus* on, India, 2628.
 — collar rot, Malawi, fungi associated with, similar to *Macrophomina theicola*, 1874c.
 —, *Corticium inquisum* on, India, 2628.
 — diseases, India, 1132.
 —, *Exobasidium vexans* on, India, control, 2170a, e; epidemiology, 244.
 —, *Fomes noxius* on, India, eradication, 2170b.
 —, *Hypoxyylon serpens* on, India, 2170c.
 —, *Pestalotia theae* on, effect of cycloheximide and dodine, 1133.
 —, *Poria hypolateritia* on, Ceylon, 245; India, 2170b; eradication, 245, 2170b.
 — root rot, Papua & New Guinea, 1878.
 —, *Tunstallia aculeata* on, India, 2170d, 2628; factors affecting, 2628.
 —, *Ustulina deusta* on, Ceylon, control, 245; India, eradication, 2170b.
 Teak (*Tectona grandis*) 'abnormal yellowing', Trinidad & Tobago, 2657.
 — leaf spot, India, 3559.
 —, *Schizophyllum commune* on, Indonesia, resistance, 2210.

Technique (see also Apparatus) for accounting for variation in number of urediospores of *Puccinia graminis* and *P. recondita*, 2417; applying fungicides, 2307x; collecting pycnidiospores of *Valsa leucostoma*, 1727; counting virus particles, 3695; culturing aquatic Phycomycetes, 3681; *Olpidium brassicae*, 324i, 3148; *Peronosporaceae*, 1984; *Puccinia graminis*, 3766; demonstrating accumulation of *Phytophthora* zoospores on roots in soil, 3679; soil fungistasis, 1291; detecting apple viruses, 195; *Ceratocystis paradoxa* in soil, 833; cowpea mosaic virus, 1538m; *Fomes annosus* on Coniferae stumps, 3029; *Glomerella tucumanensis* on sugarcane, 2983; grapevine viruses, 2282l; plum pox virus, 2523c; potato leaf roll virus, 1116; potato virus X, 1451, 1538m; potato viruses, 2586, 2587, 2727s, 3436; *Pseudomonas glycinea* on soybean, 304; sowbane mosaic virus on grapevine, 2142; *Synchytrium endobioticum* in soil, 1121; tobacco mosaic virus antigens, 845; virus particles in fresh preparations, 396; *Xanthomonas phaseoli* var. *sojense* on soybean, 304; diagnosing plant diseases, 74; viruses, 3694; differential fluorescence of nuclear structures in *Penicillium expansum*, 2005; eliminating cherry leaf roll virus from *Nicotiana rustica*, 3555o; evaluating apple proliferation virus, 2522g; barley yellow dwarf virus on cereals, 2808; carnation mottle virus, 3325; *Cochliobolus miyabeanus* on rice, 2476; *Corynebacterium michiganense* on tomato, 1786; fungi on grain, 987; evaluating fungicides, 649; against *Glomerella cingulata* on coffee, 3288; *Phytophthora* on tomato, 3483; *Sclerotinia sclerotiorum* on bean, 3524; in Japan, 2740; evaluating hop viruses, 2574; losses of diseased beet, 3508f; plant disease losses, 2308h, 3179, 3180; evaluating reaction of apple to *Phytophthora cactorum*, 2909; beet to beet western yellows and beet yellows viruses, 887; cacao to *Ceratocystis fimbriata*, 2807; to *Phytophthora palmivora*, 2404; cotton to *Fusarium oxysporum* f.sp. *vasinfectum*, 761b, 2487; *Hevea* rubber to *Microcyclus ulei*, 1467d; lucerne to *Verticillium albo-atrum*, 2101; maize to *Gibberella fujikuroi*, 3246; to *Ustilago maydis*, 129; pear to *Erwinia amylovora*, 2117, 2118; potato to *Phytophthora infestans*, 2282b; rice to grassy stunt virus, 3793; to *Xanthomonas oryzae*, 2855; tobacco to *Verticillium dahliae*, 2177; tomato to *Colletotrichum coccodes*, 1150; evaluating seed health, 2282a; soil fungicides, 2312; soil fungistasis, 2771; soil-borne pathogens, 1288; *Sphaerotheca pannosa* on rose, 2308i; streptomycin residues in pear, 2917; timber preservatives, 2685, 2687a; translocation of fungicides, 2311; *Verticillium albo-atrum* in soil and irrigation water, 46; viability of fungal sclerotia, 2330; examining cluster spore prints of *Verticillium*, 695; forecasting epidemics of *Puccinia recondita*, 3198; identifying *Ceratocystis ulmi*, 324u; fungi causing timber decay, 324w; races of *Pseudomonas solanacearum*, 3580; of *Xanthomonas malvacearum*, 2491; injecting chemicals into trees, 395; inoculating

cotton leaf curl virus, 3300; maize with *Gibberella roseum*, 465; with *Ustilago maydis*, 130; plants with vascular pathogens, 392; sorghum with *Sclerospora sorghi*, 3790; tobacco mosaic virus, 1561b; tomato with *Colletotrichum coccodes*, 2652; wheat soil borne mosaic virus, 3760; wheat with *Gibberella zeae*, 2826, 2827; with *Leptosphaeria nodorum* and *Septoria tritici*, 3028; with *Ustilago nuda*, 1323, 2821; isolating *Aphanomyces* oospores from mycelium, 332c; *Aspergillus niger* mutants, 2007; *Byssochlamys fulva* ascospores, 72; *Cenococcum graniforme* from sclerotia, 358; *Cercospora* from *Ficus elastica*, 2503; *Chaetomium* from soil, 3125; *Cylindrocladium scoparium* from soil, 3126; endoparasitic nematophagous hyphomycetes, 2002; *Erwinia rubrifaciens* from soil, 2737; fungi from stored barley, 2835; *Metarrhizium anisopliae* destruxins, 1264; particle fractions of alfalfa mosaic virus, 2282f; phaseolin from *Corticium solani* infected bean, 2232; *Phytophthora* from soil, 2333; plum pox virus from plum, 2920; potato virus A, 3441, *Pythium* and *P. ultimum* from soil, 2333, 2775; soil micro-organisms, 44; *Verticillium dahliae* toxins, 2792; wheat streak mosaic virus, 3216; labelling soil fungi, 3685; observing aphids in relation to potato haulm destruction, 3435; obtaining *Corticium solani* sclerotia, 2006; *Eudarluca caricae* conidia, 973; inoculum of *Tilletia contraversa*, 2817; synchronous germination of *Uromyces appendiculatus* urediospores, 73; toxin from *Alternaria alternata*, 2761; viable mycelium-free oospores of *Aphanomyces euteiches*, 3680; xylem fluid from cotton, 2081; preparing soil for electron microscopy, 3655; preserving cultures of *Botryosphaeria ribis*, 2359; *Colletotrichum coccodes*, 393; *Dibotryon morbosum*, 2359; *Pyrenopeziza lycopersici*, 393; preserving fleshy fungi, 70; plant viruses, 2727p; sporophores of *Polyporus tomentosus*, 394; *Stemphylium*, 3682; purifying carnation mottle virus, 3325; *Penicillium stoloniferum* virus, 3083a; potato leaf roll virus, 3443; potato virus A, 3441; wheat streak mosaic virus, 3216; recording dew, 3687, 3688; *Fusarium oxysporum* f.sp. *vasinfectum* on cotton, 761; retrieving epidemiological data in plant diseases, 3568; sampling *Cronartium aeciosporae*, 1803; spores, 3686; staining nuclei in fungi, 3683; studying *Alternaria brassicicola*, 3138; fungal cell wall, 3619; fungal deterioration of cellulose, 2791; interactions between *Fusarium oxysporum* f.sp. *vasinfectum* and cotton, 2870; *Nicotiana* and *Thielaviopsis basicola*, 3478; soil micro-organisms and plant roots, 2357; micro-organisms in soil, 3684; seed borne fungi on wheat, 2429; sporulation of *Sclerospora sacchari*, 2623; *Thielaviopsis basicola* on *Nicotiana*, 848; ultrastructure of *Belladonna* mottle virus, 2282f; time-lapse photo-micrography of microfungi in plate culture, 972.

Tectona grandis, see Teak.

Telone against *Pyrenopeziza lycopersici* on onion, 612.

—, fungitoxicity in soil, 3660.

Tephrosia, *Phytophthora nicotianae* var. *parasitica* on, 166.

Terabol, as soil treatment, 1167.

Tergitol 15-S-3A and tergitol 15-S-9, effect on soil microfungi, 3124.

Terraclor as soil treatment, 3543.

Terramycin against *Agrobacterium tumefaciens* on pecan, 267; sugarcane white leaf disease, 832.

—, effect on aster yellows on *Vinca rosea* and on stolbur on *Capsicum*, tobacco and tomato, 354.

—, hydrochloride, effect on *Venturia inaequalis*, 3608.

Terrazole as soil treatment, 2886.

—, effect on *Phytophthora* and *Pythium* in soil, 2776.

Tetrachlorobenzol against *Alternaria* and *Fusarium* on pine, 583.

Tetrachloroisopthalonitrile against *Puccinia antirrhini* on *Antirrhinum*, 1672.

—, fungicidal activity, 3100.

Tetracladium marchalianum on strawberry, 1096.

Tetracycline against aster yellows on *Vinca rosea*, 354, 712; maize stunt, 1247a; papaw bunchy top, 529; potato witches' broom, 1760; stolbur on *Capsicum*, tobacco and tomato, 354, 712.

—, toxicity to tomato, 1760.

—, hydrochloride against eggplant little leaf, 317.

Tetragonia expansa, *Narcissus* mosaic virus can infect, 2889.

TH 7462 as seed treatment for cotton, 1040.

**Thekopsora sparsa* on spruce, 3499.

Thelephora terrestris on pine, forming mycorrhiza, 2319, 2746, 3112.

—, — on *Pseudotsuga menziesii* and spruce, forming mycorrhiza, 3112.

Theobroma cacao, see Cacao.

Thiabendazole against banana fruit decay, 1738; *Cercospora beticola*, 3593g; *C. nicotianae* on tobacco, 1874a; *Colletotrichum musae* on banana, 523, 1736, 1737, 2563; *Drechslera poae* on *Poa pratensis*, 2098; *Erysiphe cichoracearum* on tobacco, 1774a; fungi on flower bulbs, 2727v; *Fusarium oxysporum* f.sp. *gladioli*, 330q; *F. o.* f.sp. *lycopersici*, 2183; *F. roseum* on banana, 2563; *Fusicoccum amygdali* on peach, 2923; *Marssonina salicicola* on *Salix alba*, 3491; *Penicillium* on orange, 759; *P. expansum* on apple, 203; on pear, 3381; *Pezicula alba* on apple, 1708, 2725d; *P. malicorticis* on apple, 515, 2725d; *Phytophthora omnivorum* on cotton, 3311a; *Podosphaera leucotricha*, 199; *P. oxyacanthae* on cherry, 199; post-harvest decay of banana and citrus, 3404; *Trichoseptoria fructigena* on apple, 515; *Ustilago striiformis* on *Poa pratensis*, 2098; *Venturia inaequalis*, 2108.

—, ineffective against *Botryosphaeria corticis* on *Vaccinium corymbosum*, 2129; *Ceratostomella ulmi*, 2666; *Pyrenopeziza lycopersici* on tomato, 2655.

—, inhibiting *Colletotrichum musae*, 2314.

—, injury to pear, 3381.

—, new systemic fungicide, 2308f.

—, see also TBZ.

GENERAL INDEX

Thiamine, effect on development and growth of *Verticillium dahliae*, 948.
 2-(4-thiazolyl) benzimidazol, see TBZ.
Thielaviopsis basicola, effect of plant excretions on development, 1964.
 —, electron microscopy, 967, 3128.
 —, in soil, 1972, 2312, 3127.
 —, on *Antirrhinum*, 2879.
 —, on bean, 1972, 3521.
 —, on *Euphorbia lathyrus*, 1140.
 —, on *E. pulcherrima*, 2886, 3336.
 —, on *Nicotiana*, 848, 3478.
 —, on *N. debneyi*, 1139, 1483.
 —, on *N. glutinosa*, 399.
 —, on *N. rustica*, 1139.
 *—, on passion fruit, 2943.
 —, on pea, 1202.
 —, on Solanaceae, 716.
 —, on tobacco, see Tobacco.
 —, separation and germination of chlamydospores, 3647.
 —, variability, 324f.
 Thiocyanomethyl sulphoxides and sulphones, new fungicides, 2727d.
 2-(thiocyanomethylthio) benzothiazole, effect on phytopathogenic bacteria, 2727u.
 Thiodan against pineapple diseases, 3412; vectors of cucumber mosaic virus on *Delphinium*, 3334.
 Thiolitin, effect on *Xanthomonas oryzicola*, 2854.
 Thiomicron against *Sphaerotheca pannosa* on peach, 2551.
 Thiophanate, new systemic fungicide, 3602.
 Thiosol against *Sphaerotheca pannosa* var. *persicae* on peach, 1090.
 Thiotox against *Pyricularia oryzae* on rice, 327a.
 Thiourea against *Rhizopus arrhizus* on apple, 3379.
 Thiovit against barley diseases, 2435; *Leveillula taurica* on Solanaceae and tomato, 1321; *Plasmopara viticola*, 810; *Sphaerotheca pannosa* on peach, 2551; *Uncinula necator*, 810.
 Thiozin-A against *Pseudopeziza ribis* on currant, 2925.
 Thiram against *Blumeriella jaapii* on cherry, 2127; *Claviceps purpurea* on *Poa pratensis*, 3358; *Colletotrichum spinaceae* on beet, 3555g; *Corticium solani* on potato, 237, 2310; damping-off of vegetables, 3188; *Didymella applanata* and *Elsinoe veneta* on raspberry, 2307x; *Erwinia atroseptica* on potato, 239; fungi on cotton, 160; *Fusarium* and *Gibberella fujikuroi* on *Sansevieria*, 3350; *Helminthosporium papulosum* f.sp. *pyri* on pear, 3380; *H. solani* on potato, 1123; *Leptosphaera coniothyrium* on rose, 3349; *Macrophoma georgica* on *Laurus nobilis*, 1681; *Oidium begoniae* on begonia, 3322; *Pezicula malicorticis* on apple, 515; *Sclerotinia fuckeliana* on grape vine, 811; *Septoria lycopersici*, 3002; *Sphaerotheca cruenta* on sorghum, 1361; *Sphaerotheca pannosa* var. *persicae* on peach, 1090; *Streptomyces scabies*, 238; *Trichosporia fructigena* on apple, 515; *Urocystis cepulae* on onion, 3064; *Uromyces dianthi* on carnation, 169; *Ustilago maydis* on maize, 1355; *Venturia inaequalis*, 787; as bulb treatment for tulip, 178; as seed treatment for barley, 989, 1344, 3220; bean, 3755; beet, 930, 3508h, l; *Brassica*, 930; celery, 930, 2713; cereals, 3755; *Coniferae*, 3023; cotton, 3313; *Cynodon dactylon*, 3352; lentil, 3516; oats, 2726a; onion, 614; parsnip, 1233; pea, 3516; *Pseudotsuga menziesii*, 1178; soybean, 1522, 3755; tobacco, 250; wheat, 3211; as soil treatment, 1678.
 [Thiram], effect of interaction with copper oxychloride, 3599.
 —, on *Botrytis cinerea*, 353; on *Gladiolus* corms, 3339.
 —, injury to *Euphorbia pulcherrima*, 1400.
 —, persistence in soil, 352, 2313.
 —, wolfen 85, technique for testing, 2312.
Thrips tabaci transmitting tomato spotted wilt virus, 1480.
Thuja, *Phomopsis juniperovera* on, USA, resistance in epidemics, 2673.
 *— *orientalis*, **Coryneum cardinale* and **Lophodermium* on, USSR, 2203.
 — *plicata*, *Didymascella thujina* on, control, 2189c, 23080.
 —, *Poria weiri* on, effect of extracts, 879.
 Thymol against *Fusarium solani* on *Antirrhinum*, 2880.
Thynon against *Uromyces appendiculatus*, 3565e.
Tigridia pavonia virus, *Freesia* streak virus morphologically similar to, 909n.
Tilia americana, *Hercospora tiliæ* on, Canada, 1496.
Tilletia barclayana on rice, 3270.
 —, *caries*, effect of *Penicillium*, 3107.
 —, on cereals, 3753.
 —, on wheat, see Wheat.
 —, *contraversa* on wheat, 2817.
 —, and *T. foetida*, enzymes in chlamydospores during hydration, 2322.
 —, *foetida* on wheat, see Wheat.
 —, *intermedia* on wheat, 1598.
 —, *pancicii* on barley and *Bromus sterilis*, 1343.
 —, *triticoides* on wheat, 1598.
Tillex as seed treatment for rice, 1372; soybean, 2708; wheat, 3211; as soil treatment, 3563a.
Timber, *Alternaria humicola* on, 586.
 —, *Aphyllophorales* on, 1180.
 —, *Aureobasidium pullulans* on, 590, 880.
 —, brown rot fungi on, effect on adsorption, 1184, 1185.
 *—, *Byssochlamys nivea* var. *lagunculariae* and *B. zollneriae* on, Brazil, 1818.
 —, *Ceratocystis* on, effect on impact strength 1183.
 —, — *piceae* and *C. pini* on, 586.
 —, *Ceriporiopsis placenta* on, in preservative tests, 2687a.
 —, *Chaetomium globosum* on, effect on impact strength, 1183.
 —, *Cladosporium* on, 880.
 —, *Coniophora arida* on, identifying, 2688.
 —, — *puteana* on, identifying, 2688; effect on impact strength, 1183; tolerance of Na pentachlorophenate, 285c.
 —, decay, identifying fungi causing, 324w; kinetics of growth of filamentous fungi in relation to, 1816.
 —, *Discula pinicola* on, 586.
 —, effect of virus diseases on specific gravity, 2189i.

[Timber], *Fomes annosus* on, 589.
 —, — *lividus* on, Philippines, 587.
 —, fungi on, NZ, 2682b; Poland, 2687; effect of lichens, 2686; of N sources on growth in culture, 587; enzymic degradation of wall and penetration, 1817; interaction, 2682c.
 —, Hymenomycetes on, species diagnosis, 2689.
 —, Hyphomycetes on, 2683.
 —, *Hypoxylon rubiginosum*, effect of temp. on spore discharge, 1287; tolerance of Na pentachlorophenate, 285c.
 —, *Lentinus lepideus* on, effect on impact strength, 1183; evaluation of creosote against, 2691.
 —, *Lenzites striata* on, Philippines, 587.
 —, — *suberiginea* on, 587.
 —, — *trabea* on, effect of enzymes, 285b; evaluation of creosote against, 2691; tolerance of Na fluoride, 285c.
 —, *Macrosporium* on, 880.
 —, *Paecilomyces* on, effect on impact strength, 1183.
 *—, *Paecilomyces lecythii* and *P. maximus* on, Brazil, 1818.
 —, *Paxillus panuoides* on, diagnosis, 1181.
 —, *Pleurotus sajor-caju* on, 587.
 —, *Polyporus* on, India, cultural diagnosis to 1499.
 —, — *borealis* on, diagnosis, 1181.
 —, — *maximus* and *P. sanguineus* on, Philippines, 587.
 —, — *stipticus* on, diagnosis, 1181.
 —, *Polystictus versicolor* on, effect of enzymes, 285b.
 —, *Poria vaporaria* on, effect on impact strength, 1183.
 —, preservation, 2682.
 —, —, effect of water immersion, 285d.
 —, —, evaluation scheme for, 1500.
 —, —, IUFRO symposium on, 1182.
 —, —, recent work at Forest Products Res. Lab., 2682d.
 —, — with borax, 1814; CFA salt, 590; copper chrome arsenate, 2682b, e; copper oxychloride, 1814; copper sulphate, 589; creosote, 587, 2691, 2692; cuprinol, 589; pentachlorophenol, 2692; permatox, 1814; quintoze, 587; sodium fluoride, 590; sodium pentachlorophenate, 2692; tanalith C, 2692; timbor, 1814; Wolman salts, 587.
 —, preservatives, evaluating, 2685.
 —, *Pycnoporus coccineus* on, evaluation of creosote against, 2691.
 —, root rot, Papua & New Guinea, 1878.
 —, *Sclerophoma* on, 880.
 —, — *pithyophila* on, 590.
 —, soft rot fungi on, evaluating preservatives against, 2685; inhibition among, 2684.
 —, *Stereum areolatum* on, diagnosis, 1181.
 —, — *hirsutum* on, tolerance of Na fluoride and pentachlorophenate, 285c.
 —, *Tetracoccsporium* on, 880.
 —, *Trametes serialis* on, tolerance of Na fluoride, 285c.
 —, *Trichoderma viride* on, effect of enzymes, 285b.
 —, chips, fungi on, control and factors affecting, 285a.
 Timbor as timber preservative, 1814.
 Tin compounds against *Phytophthora palmivora* on black pepper and *Piper betle*, 1447; *Septoria apicola* on celery, 2282k.
 —, organic against *Cercospora beticola*, 1831; *Glomerella cingulata* on *Bixa orellana*, 3422; *Phytophthora infestans* on potato, 3449.
 —, —, toxicity to *P. infestans*, 2974.
Tithonia rotundifolia, *Fusarium oxysporum* f.sp. *apii* and *F. o.* f.sp. *vasinfectum* on, 422.
 TMTD, see Thiram.
 Tobacco (*Nicotiana tabacum*), *Agrobacterium tumefaciens* on, effect of X-rays, 850.
 —, alfalfa mosaic virus, on, components and particle aggregates, 708; infectivity and stability, 3173; leaf infection, 3716; particles of component, 3717; RNA synthesis, 3156.
 —, *Alternaria* on, Rhodesia, 246.
 —, — *longipes* on, Sabah, 329e; Zambia, 636c; factors affecting, 636a; var. react., 558g, 636a.
 —, as indicator for potato viruses, 2586; tobacco etch virus, 2990; tobacco mosaic virus, 2998.
 —, aster yellows on, mycoplasma-like bodies in, 2386.
 —, *Belladonna* mottle virus on, properties, 707.
 *—, bushy-top virus on tobacco, 558a.
 —, carnation virus diseases can infect, 1394.
 —, *Cercospora nicotianae* on, C. Africa, 558a; Rhodesia, 1774a; Singapore, 714; control, 1774a; var. react., 558f; virulence, 558a.
 —, *Chrysanthemum* mild mottle virus can infect, 3331.
 *—, *Colletotrichum tabacum* on, C. Africa, 558a.
 *—, *Corynebacterium fascians* on, Iran, 1320
 —, cucumber mosaic virus on, Taiwan, 1478; breeding against, 1479; ethylene production 2373; hosts, 1478; periodic variation in infectivity, 705; protecting against tobacco mosaic virus, 3470.
 —, diseases, Costa Rica, Nicaragua and Venezuela, 846; effect on root activity, 2640; survey, 846.
 —, *Erwinia amylovora* on, hypersensitive reaction, 2179, 3582.
 —, *Erysiphe cichoracearum* on, C. Africa, 558a; Rhodesia, 246, 1774a; breeding against, 246; control, 1774a, b; resistance, 1141; var. react., 558h; virulence, 558a.
 —, etch virus, chemical properties and components, 3164.
 —, —, distinction between potato virus Y and, 3165.
 —, —, effect on CO₂ fixation, 3698.
 —, —, hosts, 2990.
 —, —, on tobacco, Cuba, 1136; Venezuela, 2990; effect on photosynthesis, 247; on quality and yield, 2171; identifying, properties, and transmission by vectors, 2990; var. react., 2171.
 —, —, purification, 2015.
 —, false broomrape, Cuba, ?virus causing, 1136.

GENERAL INDEX

[Tobacco] frenching, Australia, biological agent causing, 251.
 — leaf curl virus, Zambia, 636c.
 —, lucerne virus on, ultrastructure, 1410.
 — mosaic virus, aggregation, 2371, 2633.
 — — —, crystalline inclusions in relation to strs., 2372.
 — — —, degradation, 2633.
 — — —, effect of methylene blue, 324r.
 — — —, effect on CO_2 fixation, 3698.
 — — —, electron microscopy, 2371.
 — — —, estimating specificity of interaction of protein with RNA, 2988.
 — — —, haemagglutination test, 845.
 — — —, hosts, 844, 2020, 3706.
 — — —, hybrid with potato virus X, 3710.
 — — —, inhibition, 2020; by homeopathic and pharmacopoeial drugs, 1773; by extracts from basidiomycetes, 3697; from *Thielaviopsis basicola*, 399; by oxidised phenols, 3714.
 — — — in soil, 1308, 3416.
 — — —, inoculation, 1561b.
 — — — on apple, 322, 1076, 3369.
 — — — on bean, see Bean.
 — — — on *Capsicum*, see *Capsicum*.
 — — — on *Chenopodium album*, 402.
 — — — on *C. amaraniticolor*, 402, 403.
 — — — on cotton, 2076.
 — — — on cowpea, 404, 3157.
 — — — on cucumber, 3158.
 — — — on currant, 2556.
 — — — on *Datura stramonium*, 2019.
 — — — on *Hyoscyamus niger*, 3711.
 — — — on *Nicotiana*, 1769.
 — — — on *N. glutinosa*, see *N. glutinosa*.
 — — — on *N. Xanthi*, see *N. Xanthi*.
 — — — on *Pythium*, 82.
 — — — on *Rhoeo discolor*, 3565b.
 — — — on Solanaceae, 3711.
 — — — on tobacco, Cuba, 1136; Rhodesia, 2995; Sabah, 329e; USA, epidemiology, 2629; Zambia, 636c; breeding against, 2995 changes in protein constitution, 3705; effect of antibiotics, 843; of chemicals on multiplication, 3692; of cytokinins, 2635; of extracts on infectivity, 2631; of herbicides, 1770; of temp., 841, 1475; ethylene production by leaves, 3159; fluorescent antibody staining, 397; heat treatment and acquired resistance, 3474; in leaf plastids, 3472; incorporation of radio-active uridine in infected leaves, 77, 976; infectivity, 840, 3696; inhibition by extracts from *Escherichia coli*, 400; isolation and properties of mutant, 248; nematodes in, 1771; nuclear structure, 838a, b; particles in cells, 249; peroxidase activity associated with induced resistance, 2630; photorecovery of UV inactivated RNA, 3473; protein synthesis, 2795; protoplast infection by RNA, 2632; reversion, 841; RNA infectivity, 1312, 3706; RNA synthesis, 3156, 3471; serology of mutant, 2172; spread and instability in tissues, 841; starch metabolism, 1134; transmission by vectors, 324s, 1477; yellow variant, 557.
 — — — on tomato, see Tomato.
 — — —, replication of infectious form in chicken embryos, 1563.
 — — —, serological relationships, 909q.
 — — —, unsheathing of RNA, 1562.
 [Tobacco mosaic virus] + brom mosaic virus, reconstruction of mixed particles, 3160.
 — — — + cucumber mosaic virus on tobacco, intranuclear inclusions, 2634.
 — — — + — — — on tomato, 1485.
 — — — + — — —, reconstruction of mixed particles, 3160.
 — — — + potato virus X on tomato, 331r.
 — — — aucuba str. on tobacco, amorphous inclusions in, 2636.
 — — — bean str. on bean, 1204.
 — — — defective strs. on tobacco, properties, 841, 1135.
 — — — green str., 704.
 — — — N str. on tobacco, serology, 2637.
 — — — *Plantago media* str., Yugoslavia, 78 str. 1 on tomato, 2997.
 — — — thermophilic str., properties, 842.
 — — — tobacco + tomato strs. on tomato, 1779.
 — — — Ul str. on *Crambe abyssinica*, 3703
 — — — — on tobacco, ethylene production, 2373; susceptibility and symptom expression, 1476.
 — — — — (D) and (SB) strs. and U-5 str. on tobacco, 2989a; X-protein in, 2989b.
 — — — — yellow aucuba str. on tomato, 1311.
 — — — necrosis virus, chemical characterizations, 1564.
 — — — — CMI/AAB description, 3151.
 — — — — electron microscopy, 3077j.
 — — — — hosts and inhibition, 2020.
 — — — — in soil, 1538l.
 — — — — not transmitted by vectors, 324x.
 — — — — on bean, 1515, 3161.
 — — — — on citrus, 3280.
 — — — — on clover, 1836.
 — — — — on lettuce, 3702.
 — — — — on *Ranunculus asiaticus*, 910f.
 — — — — on tobacco, structure, 2638.
 — — — — relationships with satellite virus and serology, 3077d.
 — — — — transmission by *Olpidium brasiliaceae*, 1307; by phycomycetes, 415.
 — — — — A, Yugoslavia, detecting and properties, 2375.
 — — — — D on bean, 2370.
 — — — — satellite virus, chemical characterizations, 1564.
 — — — — CMI/AAB description, 3151.
 — — — — electron microscopy, 3077j.
 — — — — on bean, 3161.
 — — — — relationships of English and American strs., 3077d.
 — — — — str. 6 on *Crambe abyssinica*, 3703.
 — — — ozone injury, resistance, 561.
 — — — *Peronospora tabacina* on, Australia, 558b; Cyprus, 911; Europe, 2a; Germany (E.), 2284; *Iran, 1320, 2991; Iraq, 1481, 3181b; Mediterranean, 2a; Poland, 323; Switzerland, 2641; USA, 558b; USSR, 250, 2642; control, 250, 911, 1138, 1481, 2642, 2643; effect of amino acids on resistance, 559; of antibiotics, 2174; epidemiology, 2a; factors affecting, 2175, 2641, 2642; forecasting, 2a; genetics of resistance, 847; infection in relation to conidial concentration, 1316; new race, 2991; overwintering, 560, 2642; physiologic specialization, 558b; spore dispersal, 2a; sporulation, 2282d;

GENERAL INDEX

synergism between two lines, 3476; var. react., 250, 1776, 2641, 2991, 3476; virulent str., 2641.

[Tobacco], *Phyllosticta* on, USA, 849.

*—, *Phytophthora nicotianae* on, *Costa Rica and Nicaragua, 846; control, 2027a; effect of nematodes, 1137; heat-induced susceptibility, 1775; *Meloidogyne* associated with, 2027a; var. react., 1137.

—, —, — var. *parasitica* on, 165.

—, potato virus X on, effect of imanin, 1756; of yeast filtrates, 2173; infectivity, 3439; variability of str., 2017.

—, — Y on, Portugal, 821; Rhodesia, breeding against, 246; effect of herbicides, 1770; technique for diagnosing, 74.

—, *Pseudomonas* on, Rhodesia, breeding against, 246; hypersensitive reaction, 2179.

—, — *angulata* on, Rhodesia, breeding against, 2995; susceptibility, 558d.

—, — *lachrymans* on, effect of heat-treated cells on hypersensitive reaction to *P. solanacearum*, 3581.

—, — *solanacearum* on, Rhodesia, 558c; control, 2027a; differentiation of races, 3580; factors affecting, 558c; hypersensitive reaction, 3581; *Meloidogyne* associated with, 2027a; var. react., 558c, 1484a, b.

—, — *syringae* on, hypersensitive reaction, 642.

—, — *tabaci* on, Rhodesia, 2178, 2995; ammonia in relation to, 1142; breeding against, 2995; Cu deposits on leaves, 2178; effect of fungicides, 3605; genetics of pathogenicity, 1143; nonvirulent mutants, 2996; var. react., 558e.

—, *Pythium splendens* on, Netherlands, 690.

—, rattle virus, biochemistry, 3557d.

—, —, CMI/AAB description, 3151.

—, —, genetics, 1538n.

—, — in soil, 1538l.

—, — in *Trichodorus pachydermus*, 3170.

—, — on aster, 3321.

—, — on *Nicotiana clevelandii*, 2374, 3169.

—, — on potato, 2597, 3557h.

—, — on *Ranunculus asiaticus*, 910f.

—, — on tobacco, 3321.

—, *Rhizopus arrhizus* on, control, 1774c.

—, ringspot virus, CMI/AAB description, 3151.

—, —, hosts, 3700.

—, — on ash, 3083h.

—, — on bean, 3519.

—, — on cotton, 3299.

—, — on *Forsythia*, 3083e.

—, — on *Gladiolus*, 2088.

—, — on grapevine, 3416.

—, — on *Lotus corniculatus*, 1248d.

—, — on *Petunia hybrida*, 1683.

—, — on soybean, 5l.

—, — on squash, 312.

—, — on tobacco, USA, serology, 3475; Yugoslavia, properties, 2639.

—, —, RNA deficient components, 3163.

—, —, satellite-like particle resembling, 3162.

—, —, tubular inclusion bodies in hosts, 3153.

—, stolbur on, Czechoslovakia, 2599; USSR, 3172; control, 712, 3172; ecology, 2599; effect of antibiotics, 354; symptoms, 3172; transmission by vectors, 2599, 3172.

[Tobacco] streak virus on bean, 3166.

*—, — on *Cassia occidentalis*, 3530.

*—, — on *Chenopodium quinoa*, 909m, 3166.

—, — on cotton, 762.

—, — on *Dahlia* and *Datura stramonium*, 909m.

*—, — on soybean, 3530.

—, — on tomato, 565.

—, stunt virus, transmission by phycomyces, 415.

—, *Thielaviopsis basicola* on, causing leaf necrosis, 2993; control, 2176; effect of benomyl, 2993, 2994; of cedar posts, 3477; of *Pseudomonas*, 324a; effect on pectic enzyme activity, 2644; genetics of resistance, 1483; new str., 2992; resistance, 1139; var. react., 1139, 1484a, b.

—, tomato mosaic virus on, mutants, 1538q.

—, — spotted wilt virus on, Yugoslavia, 2639.

—, vein necrosis virus on tobacco, effect of herbicides, 1770.

—, vein-banding mosaic virus, hosts, 1561a.

—, *Verticillium dahliae* on, host specificity, 1777; testing for resistance, 2177.

—, virus diseases, polyribosomes and susceptibility, 331w; results of 4th international community trials, 1769.

—, *Xanthomonas axonopodis* on, effect of heat treated cells on hypersensitive reaction to *Pseudomonas solanacearum*, 3581.

—, — *vesicatoria* on, 14.

—, *×Nicotiana goodspeedii*, *Peronospora tabacinica* on, resistance, 1482.

?*Tolyposporium penicillariae* on millet, 1583.

—, — on sorghum, 916.

Tomato (*Lycopersicon esculentum*), *Aerobacter cloacae* on, USA, causing post harvest decay, 330j.

—, *Agrobacterium tumefaciens* on, arginine levels, 1263.

—, alfalfa mosaic virus on, Germany, symptoms, 2999.

—, *Alternaria* on, USA, causing post harvest decay, 330j.

—, — *alternata* on, development, 2650.

*—, — *solani* on, *Iran, 418; effect of soil moisture, 983; effect on translocation, 331f, 3486; sporulation, 1281.

—, antibiotic from *Pseudomonas mycophaga* penetrating embryo and seed coat, 657.

—, *Ascochyta lycopersici* on, antagonism of saprophytic fungi, 2180.

—, *Aspergillus flavus* on, effect on, 1151.

—, aspermy virus on *Ageratum houstonianum*, 2882.

—, — on *Chrysanthemum*, 2883, 3330.

—, — on *Chrysanthemum indicum*, 2882.

—, — on tomato, effect on leaf water content, 3479.

—, —, serological relationships, 2022.

—, aster yellows on, transmission by grafting and vectors, 981.

—, asymmetric chlorosis, Poland, not caused by virus, 1147.

—, beet curly top virus on, recovery from, 1783; str., 3512; var. resistance, 1146.

—, black ring virus, beet ring spot virus variant, 2f.

—, —, — in *Longidorus elongatus*, 979.

[Tomato black ring virus], non-occurrence of tubular inclusion bodies in hosts, 3153.
 — — — — — on *Asparagus*, 633.
 — — — — — on *Chenopodium quinoa*, 414.
 — — — — — on cucumber, 3701.
 — — — — — on fruit, 785.
 — — — — — on grapevine, 2282.
 — — — — — on stone fruit, 3384.
 ? — — — — — on strawberry, 3558d.
 — — — — — on tomato, Poland, inactivation and properties, 1537d.
 — — — — — study, 2f.
 *— — streak, Chile, tobacco mosaic virus + potato virus X causing, 2645.
 — blossom-end rot, genetics of resistance, 256.
 — blue disease, Portugal, 910k.
 —, *Botrytis cinerea* on, Jersey, 321a; Netherlands, 1538c; control, 321a, 909a; factors affecting, 2654, 3006; saprophytic bases for initiation, 909d; symptoms, 3006, 3007.
 —, Brazilian big bud on, Brazil, mycoplasma-like bodies in, 2648.
 — bushy stunt virus in soil, 1308.
 — — — — — interactions of organo-mercurials with RNA, 703a, b.
 *— — — — — on apple, 1076.
 — — — — — serology of 3 str., 702.
 —, *Cladosporium fulvum* on, control, 909i, 1549, 2653, 3605; factors affecting, 2654; var. react., 2653.
 —, *Cladosporium hordei*, *C. linicola* and *C. transchelii* in rhizosphere, USSR, effect on growth, 3009.
 —, clover phyllody on, mycoplasma-like bodies in, 1315.
 —, *Cochliobolus miyabeanus* on, 141.
 —, *Colletotrichum coccodes* on, antagonism of saprophytic fungi, 2180; determining genetic reaction, 2652; factors affecting, 569; resistance, 1150, 2181; var. react., 2181.
 —, — *kruegerianum* on, Czechoslovakia, *Alternaria solani* associated with, description, 3004.
 —, *Corticium rolfsii* on, India, susceptibility, 3074.
 —, — *solani* on, Egypt, 1784; control, 566, 1784.
 *—, *Corynebacterium michiganense* on, Argentina, *2187, 3085; Japan, 570; assaying seed for, 1786; bibliography and review, 2656; control, 1787; inoculum levels for infection, 2188.
 —, *Curvularia lycopersici* on, control, 1488.
 — damping-off, control, 1317.
 —, *Dematiaceae* in rhizosphere, USSR, 3009.
 —, dichlofuanid residues on, 909a.
 — diseases, Argentina, 3085; Poland, control, 1148.
 —, *Drechslera australiense* on, effect on organic acids, 3008; on sugar content, 3487.
 —, effect of Cu sprays and smog on, 913.
 —, *Endogone macrocarpa* var. *geospora* on, forming mycorrhiza, effect of inoculum conc., 936b.
 —, *Erwinia carotovora* on, USA, causing post harvest decay, 330j.
 [Tomato], *Fusarium oxysporum* on, Armenian SSR, 2032; effect of ethylene, 324b; fusaric acid in selective pathogenicity, 940.
 — — — — — f.sp. *lycopersici* on, Brazil, 2185; Egypt, 1784; Irish Repub., 3558c; Italy, 3484; USA, 330f, 2184; antagonism of saprophytic fungi, 2180; control, 330f, 566, 1784, 2182, 2183, 2184, 3749; effect of ethionine and methionine, 941; of heavy metals, 1785; effect on phenol content of host, 254; on resistant and susceptible plants, 2186; factors affecting, 330f, 3485; incidence, 3558c; physiologic races, var. resistance to, 2185; polygalacturonase production, 2325; race 2 in Ark., 2184; var. react., 2185, 3484.
 — — — — — + *F. o.* f.sp. *dianthi* on, effect on phenol content, 3003.
 — — — — — + *Meloidogyne incognita* on, 567.
 *—, — *redolens* on, Scotland, 1870d; *UK, symptoms and transmission by seed, 3730a.
 —, — *solani* on, USSR, 1149.
 —, grey sterile fungus on, 1095.
 — wall, bacteria associated with, 1152; caused by tobacco mosaic virus, tomato internal browning identical with, 3083g.
 —, *Humicola* in rhizosphere, USSR, 3009.
 — internal browning, Italy, 2998; caused by tobacco mosaic virus, 2998, 3083g; tomato greywall identical with, 3083g.
 — leaf curl virus on tomato, effect of micro-elements, 1305.
 —, *Leveillula taurica* on, Rumania, 1321; control, 1321, 1487; factors affecting, 1487; incidence and symptoms, 1321.
 —, micromycetes in rhizosphere, USSR, 3009.
 — mosaic virus on *Nicotiana*, 1769.
 — — — on tobacco, 1538q.
 — — — on tomato, Netherlands, effect on yield, mutants, 1538q.
 —, mycoflora in rhizosphere of healthy and virus-infected plants, 3715.
 — mycorrhiza, 936b.
 — nutritional disorders, 913.
 —, *Phoma destructiva* on, control, 1488.
 —, *Phytophthora* on, screening fungicides against, 3483.
 —, — *infestans* on, Germany (E), 2284; Iran, 3735a; Jersey, 321a; Netherlands, 1538d; (Poland, 253, 1148, 1486; USSR, 3482; control, 321a, 1148, 2310; genetics of resistance, 853, 3001; losses, 321a; overwintering, 3482; pathogenicity of str., 1486; races (E. Germany), 3000; resistance, 2649; study, 253; survival in soil, 3451; var. react., 2649.
 —, — *megasperma* on, 504.
 —, — *nicotianae* on, Netherlands, 1538d.
 —, — *verrucosa* on, Scotland, 1870d.
 —, potato gothic virus can infect, 1454.
 —, — spindle tuber virus on, as test for elimination from potato, 1758.
 —, — stolbur can infect, 3438.
 —, — virus X on, base composition of RNA, 3709.
 —, — witches broom disease on, effect of sterols, ?mycoplasma causing, 3481.
 —, *Pseudomonas solanacearum* on, 3579; Ceylon, biotypes and factors affecting, 343; spread by clipping, 1490.

GENERAL INDEX

*[Tomato], *Pyrenopeziza lycopersici* on, Italy, 1569a; build-up of infection, 1489; effect of soil treatment, 2655; predicting rate of spread, 909c.

—, *Pythium aphanidermatum* on, control, 1900; effect of soil temp., 3129.

—, *butleri* on, 1862.

—, *debaryanum* on, Egypt, 1784; control, 566, 1784.

—, *myriotylum* on, effect of soil temp., 3129.

— ringspot virus, CMI/AAB description, 3151.

— — —, distinct from elm mosaic virus, 2195.

— — — on cucumber, 2263.

— — — on *Gladiolus*, 2088.

— — — on *Pelargonium*, 1399.

— — — on raspberry, 215.

— — —, transmission by vectors, 2195.

— root rot, effect of metham sodium, 909b.

**Sclerotinia sclerotiorum* on, India, 1568a.

—, *Sclerotium cepivorum* on, 720.

—, *Septoria lycopersici* on, control, 2651, 3002; var. react., 2651.

— spotted wilt virus on *Nicotiana*, 1480.

— — — on tobacco, 2639.

— — — on tomato, *Chile, 2647; USSR, 2646; electron microscopy, 3077j, 3171; factors affecting resistance, 2646; hosts, 2647; losses, 2646; symptoms 2647; var. react., 2646.

—, *Stemphylium* in rhizosphere, USSR, 3009.

—, — *solani* on, Brazil, pathogenicity and variability, 3005.

—, *stolbur* on, Czechoslovakia, 2599; Italy, 564; USSR, 3172; control, 712, 3172; ecology, 2599; effect of antibiotics, 354; of microelements, 1305; electron microscopy, 852; factors affecting, 2599; mycoplasma-like bodies in, 564; symptoms, 3172; transmission by vectors, 2599, 3172.

—, — C & SM on, mycoplasma-like bodies in, 1315.

—, — P on, France, electron microscopy, ?mycoplasma causing, 3480.

— streak virus on tomato, USSR, factors affecting resistance, 2646.

—, *Streptomyces* on, 544.

—, tobacco etch virus on, Venezuela, identifying and transmission by vectors, 2990.

—, — mosaic virus on, France, 1; Hungary, 1485; USSR, 562; base composition of RNA, 3709; causing greywall and internal browning, 3088g; control, 2285h; cytopathology of inclusions, 1778; effect of heat treatment on viability of seed, 1782; of microelements, 1305; effect on ultrastructure in leaf cells, 1144; factors affecting, 563, 1781; genetics, 563, 1780; overwintering in roots, 252; phosphorus content, 851; presence in roots of healthy plants, 1145; spread by clipping, 1490; symptoms, 1485; var. react., 324t, 1485.

—, — — —+cucumber mosaic virus on, Hungary, 1485.

—, — — —+potato virus X on, effect on, 331r.

—, — — — str. K on, serology, 2637.

—, — — — 1 on, 324t; genetics of resistance, 2997.

[Tomato, tobacco mosaic virus], tobacco+tomato str. on, cross-protection, 1779.

—, — — —, yellow aucuba str. on, increase of virulence, 1311.

—, — streak virus on, Italy, physical properties, 565.

—, *Verticillium* on, control, 92.

—, — *albo-atrum* on, Armenian SSR, 2032; antagonism of saprophytic fungi, 2180; control, 909i, 2308b; resistance, 534, 2727w.

—, — *dahliae* on, 568; Italy, 3484; *Turkey, 3182b; effect of toxic fractions, 255, var. react., 3484.

— virus diseases, USSR, 562.

—, *Xanthomonas vesicatoria* on, 14; *Nigeria, 328f.

— yellow leaf curl virus, anti-tobacco mosaic virus factor in vectors, 3704.

Torenia fournieri, tobacco mosaic virus can infect, 3565b.

Torula utilis, effect on infectivity of potato virus X on potato, 1453; on tobacco, 2173.

Toxoptera citricidus transmitting citrus tristeza virus, 756.

Trachyspermum ammi seed treatment, 3426.

Trachysphaera fructigena, CMI description, 2338.

— on cacao, 89.

Trametes serialis on timber, 285c.

— *trogii* on trees and shrubs, 1156.

Tranzschelia pruni-spinosae on plum, 212.

Trechispora brinkmannii perfect state of *Phymatotrichum omnivorum*, 2350.

Trees, *Crumenula sororia* on, biology, 2189h.

—, diseases of, Canada, book on, 1153.

—, fungi on, Germany, 1156.

—, gas injury to, 913.

—, hardwood, photo guide to discoloration and decay in, 1788.

—, injecting chemicals into, 395.

—, lime-induced chlorosis in, control, 3667.

—, *Phytophthora cinnamomi* on, resistance to, 572.

—, *Polyporus* on, India, cultural diagnosis of, 1499.

—, *Uredinales* on, Canada, annotated lists with keys, 1154.

**Trianthema monogyna*, eggplant str. of cucumber mosaic virus on, India, transmission by vectors, 3073.

3-trichloromethylmercapto derivatives, anti-fungal activity, 1550.

2,4,6-trichlorophenate against *Botryosphaeria corticis* on *Vaccinium corymbosum*, 2129.

2, 4, 5-trichlorophenol as soil treatment, 2413.

2, 4, 5-trichlorophenoxy acetic acid against watermelon mosaic virus on vegetable marrow, 2269.

2, 4, 5-trichlorophenylsulfonylmethyl thiocyanate against *Venturia inaequalis* and *V. pirina*, 2308v.

—, interaction with spores of *Fusarium culmorum*, 18.

Trichocarpin, distribution in poplar, 2282e.

Trichocladium opacum on strawberry, 1096.

Trichoconis padwickii on rice, 329b, 754, 1022.

Trichoderma album, *T. glaucum* and *T. koningii*, antagonism to *Fomes annosus*, 280.

— *koningii*, cellulose biosynthesis, 36.

GENERAL INDEX

Trichoderma koningii in soil, 1291.
 — on *Pennisetum typhoides*, 136.
 — *viride*, antagonism to *Corticium rolfsii* on clover, 782; *Fomes annosus*, 280; *Sclerotium cepivorum* on onion, 308a; tomato pathogens, 2180.
 — —, cellulose biosynthesis, 36.
 — —, effect of maleic hydrazide, 365; of ozone, 671.
 — —, effect on seed germination, 48.
 — —, in rhizosphere of bean, 3520; lucerne, 3363.
 — — in soil, see Soil.
 — — on lucerne, 1411.
 — — on timber, 285a, b.
 — — on *Vicia faba*, 923.
 — — parasitizing *Sclerotinia sclerotiorum*, 682; sugarcane stem rot fungus, 552.
 — —, photo induced sporulation, 364.
 — —, UV microscopy, 954.
Trichodermin-3 against beet black leg, 1511.
Trichodorus, effect on tobacco rattle virus on potato, 3557h.
 — transmitting tobacco necrosis and tobacco rattle viruses, 1538i.
 — *minor* transmitting tobacco rattle virus, 3321.
 — *pachydermus*, tobacco rattle virus in, electron microscopy, transmission, 3170.
Trichometasphearia pedicellata in soil, 683.
 — *turcica*, growth limitation, 3621.
 — —, hosts, 3789.
 — — on lucerne, 1065a.
 — — on maize, see Maize.
 — — on sorghum, 745.
Trichoscyphella willkommii on larch, 573, 869.
Trichoseptoria fructigena on apple, 515.
Trichothecin against *Fusarium* on maize, 134; *Peronospora tabacina*, 2174; *Sclerotinia laxa* on peach, 3388; as seed treatment for wheat, 1614.
 — toxicity to tobacco, 2174.
Trichothecium roseum, effect of amino acids, 3115; of carbohydrates, 2327; of nutrition on sporogenesis, 1558.
 — —, mutations, 1271.
 — — on apple, 3645.
 — — on grain, 97.
 — — on *Venturia inaequalis* and *V. pirina*, 3572.
 — —, penetration of nutritive substances into cell, 673.
Tridemorph against *Erysiphe graminis*, 2308e, g, 2727c.
 —, popular review, 3596.
Trifolium, see Clover.
Trifungol, see Ferbam.
Trioza erytreae, transmitting citrus greening virus, 3277.
Triphenyltin acetate, effect on fungal growth, 3105.
 — hydroxide, effect on *Pyricularia oryzae*, 3262a, b.
Triphenyltinoleate, effect on *Phytophthora infestans*, 3449.
Triticum, see Wheat.
Tritisan as seed treatment for lentil and pea, 3516; wheat, 3211.
Triton B-1956, use on papaw, 3410.
 — X-100, use on *Hevea* rubber, 831.
Trizone as soil treatment, 2027c.
Tropaeolum virus causing ringspot, particles, 3077g.
 — *majus*, *Acroconidiella tropaeoli* on, NZ, 1685.
 — —, peach virus can infect, 3565d.
 — — phyllody virus, transmission by vectors, 2496.
 *— —, *Xanthomonas uppalii* on, India, 779.
Tsuga canadensis, *Keithia tsugae* on, Poland, 1815.
 — *heterophylla*, *Echinodontium tinctorium* on, substrate suitability, 324v.
 — —, *Fomes annosus* on, control, 1814; effect of herbicides, 3030; resistance, 2189b.
 — *sieboldii*, *Phellostroma tsugae* on, *Strasseropsis tsugae* proposed as new name, 3031.
Tuber aestivum on *Corylus avellana*, forming mycorrhiza, 3615.
 — *albidum* on pine and poplar, forming mycorrhiza, 3613.
 — *brumale* on *Corylus avellana*, forming mycorrhiza, 3615.
 — *maculatum* on pine, forming mycorrhiza, 3614b.
 — *melanoporum* on *Corylus avellana*, forming mycorrhiza, 3615.
Tubercinia corsica on *Stipa tortilis*, 2342.
Tuberulariales, anaerobic growth, 359.
Tuberculina maxima parasitizing *Cronartium ribicola* on pine, 276; *Peridermium pini* on pine, 3036.
Tulasnella calospora on *Spathoglottis plicata*, forming mycorrhiza, 3618.
Tulip (*Tulipa*); ?*Arabis* mosaic virus on, 1870g; *UK, introduced from the Netherlands, symptoms, 3730c.
 — black blotch necrosis, etiology, 1870g.
 — blueing, 1390.
 *—, *Botrytis tulipae* on, *Finland, 2031; USSR, 178; control, 178, 909e, 2512; effect on, 2512; lesion type, 909e; survival, 2512.
 — breaking virus, comparison with lily mosaic virus, 1670.
 — — — on tulip, USSR, 178, 1391.
 —, *Corticium solani* on, 2727k.
 —, *Corynebacterium oortii* on, incidence, 1392.
 — diseases, Spain, 1047.
 — disinfection, 2727f.
 —, *Fusarium oxysporum* on, control, 2893.
 — — — f.sp. *gladioli* on, USSR, 178.
 — gummosis, 1390.
 —, *Puccinia prostii* on, UK, imported from Greece, 1389.
 — stem rot and topple, 1390.
 — vein necrosis virus on tulip, USSR, 1391.
 —, *Verticillium albo-atrum* on, USSR, 178.
 — viruses, 3557f.
Tulipa, see Tulip.
Tunstallia aculeata on tea, 2170d, 2628.
Turf diseases, Pakistan, 2515.
 —, fungi on, USA, control, 3355.
 —, *Pythium* on, USA, 3354.
 —, see also Grasses, Gramineae.
Turmeric (*Curcuma longa*), *Taphrina maculans* on, dikaryotization, 694.
Turneraceae producing antifungal substance, 1907.

GENERAL INDEX

Turnip (*Brassica rapa*), *Diplodia* can infect, 2121.
 — mosaic virus, CMI/AAB description, 3151.
 — — — on *Brassica perviridis*, 1820, 2212.
 — — — on *Chenopodium amaranticolor*, 1186.
 — — — on lettuce, 903, 1819.
 — — — on *Limonium perezii*, 176.
 — — — on radish, 1186.
 — — — on turnip, changes in aggregates, 2282g.
 — — — Japanese str. on *Chenopodium album* and *C. amaranticolor*, 402.
 —, *Plasmodiophora brassicae* on, genetics of resistance, 2693.
 — yellow mosaic virus, 704.
 — — —, CMI/AAB description, 3151.
 — — —, effect of organic Hg compounds, 3693.
 — — — on *Brassica chinensis*, 2214.
 — — — on cabbage, 77, 882, 3692.
 — — — on turnip, Yugoslavia, ?source, 2213.
 — — —, primary structure of protein, 331s.
 — — —, RNA synthesis, 331c.
 — rape (*Brassica napus*), *Leptosphaeria maculans* on, thesis, 3504.
 — —, *Verticillium* on, Sweden, biology, 1503.
 Tutane against *Botrytis* on *Delphinium*, 3334.
 Tuzet against *Colletotrichum* on coffee, 1378b; *Glomerella cingulata* on coffee, 3288; *Pseudomonas pisi* on pea, 2697.
 —, effect on *Glomerella cingulata* on coffee, 1027.
 Tween 20, effect on appressorium formation by *Cochliobolus miyabeanus*, 141.
 Tylenchorhynchus claytoni and *T. agricola*, effect on *Fusarium roseum* and *Pythium ultimum* on maize, 1015.
 Tylosin, effect on aster yellows on *Vinca rosea* and stolbur on *Capsicum*, tobacco and tomato, 354.
Tympinis hypopodia on pine, 1809.
 — *larinica* on larch, 868.
Typhula incarnata, effect of fungicides, 2727n.
 — — on barley, 1870a.
 — — on *Festuca* and *Poa pratensis*, 1690.
 — — on wheat, 1870a.
 *— *ishikariensis* on *Festuca*, 1690.
 — — on grasses, 1691.
 *— — on *Poa pratensis*, 1690.

Ulmus, see Elm.
 UV light, effect on germination of *Sphaelotheca cruenta*, 2468a, b; on potato virus X on potato, 1452, 1757; on sporulation of fungi, 2282j; from strawberry, 1096; of *Leptosphaeria nodorum*, 2823; *Sclerotinia convoluta*, 324g; *Septoria tritici*, 2823.
 Umbelliferae, *Ramularia coriandri* can infect, 225.
Uncinula necator, culturing, 1984.
 Uranyl salts, effect on victorin toxicity, 1623.
 Urea against *Mycosphaerella ribis* on gooseberry, 3394; *Venturia inaequalis*, 511, 2108, 2725b.
 Uredinales, check list and host index, 1295.
 —, co-evolution of hosts and, 332g.
 —, culturing, 1260e.
 —, effect on physiology of host, 1248f.
 —, factors affecting germination, 332b.
 — in the air, Canada, 3189.
 —, Malaysia, 3134; USA, 1295; the World, 688.
 — on trees, 1154.
 **Uredo hameliae* on *Hamelia patens*, 174.
Urocloha panicoides, *Uromyces setariae-italicae* on, India, 748.
Urocystis agropyri on wheat, 107, 3193.
 — *cepulae* on onion, 613, 614, 3064.
Uromyces appendiculatus, germination of uredospores, 3122.
 — —, membrane-bound ribosomes in germinated uredospores, 1951.
 — — on bean, see Bean.
 — —, technique for obtaining synchronous germination of uredospores, 73.
 — *betae* on beet, 3045, 3556e.
 — *cliguyi*, life cycle, 1679.
 — *cynodontis*, transformation phenomena, 677a, b, 678.
 — *dianthi*, CMI map, 84.
 — — on carnation, 169, 321c, 1675.
 — *fabae*, see *U. vicia-fabae*.
 — *iranensis* on barley and wheat, 988.
 — *kochiae* on *Kochia prostrata*, 496.
 — *phaseoli*, see *U. appendiculatus*.
 — *pisi* f.sp. *lathyri* on *Lathyrus sativus*, 2103.
 — *setariae-italicae*, India, hosts, 748.
 — *striatus* on lucerne, 3364.
 — *transversalis* on *Gladiolus*, 3731c.
 — *viciae-fabae* on *Lathyrus*, 2706.
Urtica dioica, *Cephalosporium*, *Phoma acuta* and *Stachybotrys atra* on, growth and sporulation, 3640.
 Ustilaginales, host-parasite relations, 938.
 — in Hawaii, 62; India, 3135; Poland, 2343; USSR, 1978; Western Mediterranean, 2342.
 —, infra-structure of haustoria, 938.
 —, nomenclatural changes, 3135.
 — on cereals, 2407.
 —, phylogeny, 63.
Ustilaginoidea virens on rice, 1021.
Ustilago avenae, effect of *Penicillium*, 3107.
 — — on oats, see Oats.
 — —, teliospore surface structure, 2448.
 — *cynodontis* on turf, 2515.
 — *hordei*, CMI map, 84.
 — —, effect of *Penicillium*, 3107.
 — — on barley, see Barley.
 — — on oats, see Oats.
 — —, parasexual recombination, 2436.
 — *maydis*, effect of carboxin and oxycarboxin on metabolism, 3102; of *Penicillium*, 3107.
 — —, formation of diploids, 1354.
 — — in soil, 2331.
 — —, lysis and haplo-lethal deficiency, 331j.
 — —, mutants, 331k.
 — — on maize, see Maize.
 — —, review of genetic characteristics, 128.
 — *mesatlantica* on *Aegilops* ?*triuncialis*, 2342.
 — *nigra*, effect of *Penicillium*, 3107.
 — — on barley, 113, 3220, 3777.
 — *nuda*, β -amylase activator, 1206.

GENERAL INDEX

[*Ustilago nuda*], bacterial substance toxic to chlamydospores, 2d.
 — —, effect of carboxin and oxycarboxin on metabolism, 3102.
 — — on barley, see Barley.
 — — on wheat, see Wheat.
 — *penniseti* var. *verruculosa* on *Pennisetum ciliare* and *P. dichotomum*, 2342.
 — *scitaminea* in soil, 549.
 — — on sugarcane, see Sugarcane.
 — *striiformis* on *Agrostis palustris*, 3356.
 — — on *Poa pratensis*, see *Poa pratensis*.
 — — var. *agrostidis* on *Agrostis palustris*, 1054.
 — *tritici* on wheat, see Wheat.
 — *violacea*, effect of UV light on nuclear fusion, 30.
Ustulina deusta on tea, 245, 2170b.
 — *vulgaris*, see *U. deusta*.

Vaccinium, Exobasidium vaccinii on, physiological aspects, 3396.
 — *Godronia cassandrae* f.sp. *vaccinii* and *G. urceoliformis* on, Canada, pathogenicity 858.
 — *Sclerotinia vaccinii-corymbosi* on, var. react., 1730.
 — storage disorders, factors affecting, 2555.
 — *angustifolium*, *Pseudophacidium ledi* on, Canada, 1497.
 — *corybosum*, *Botryosphaeria corticis* on, USA, 1093; eradication, 2129; histology, 2128; pathogenicity of isolates, 1093; penetration, 2128; var. react., 1093.
 — —, *Gloeosporium minus* on, USA, effect of leaf exudates, 3395.
 — *myrtillus*, *Godronia cassandrae* f.sp. *vaccinii* and *G. urceoliformis* on, Canada, pathogenicity, 858.
Valsa ambiens on birch, 2192.
 — *cincta* on almond, 1089.
 — — on peach, 324m.
 — — on pear, quince and stone fruit, 1089.
 — *eugeniae*, CMI description, 2338.
 — *leucostoma* on peach, 1726, 1727.
 — *persoonii* on almond, 1089.
 — — on peach, 324m.
 — — on stone fruit, 1089.
 — *sordida* on pear, 2541.
Vanilla, Corticium solani on, forming mycorrhiza, 1107.
 — *Fusarium oxysporum* f.sp. *vanillae* on, 1748; associated with *C. solani*, 1107.
 — —, *solani* on, 1748.
Vanillin in leaf wound sap of *Phaseolus lunatus*, 2235.
Yapam against *Verticillium dahliae* on *Euphorbia pulcherrima*, 3335; as soil treatment, 479, 1167, 3563a.
Varicosporium elodea in rhizosphere of bean, 3520.
Vegetable marrow (Cucurbita pepo), *Erysiphe cichoracearum* on, Egypt, 2271.
 — *Mycosphaerella melonis* on, Rumania, 1241.
 — —, watermelon mosaic virus on, control, 2269.
Vegetables, damping-off, Bulgaria, 3188.
 — diseases, India, 2211; Israel, check list, 2030; book on, Italian, 3040; factors affecting, 2285c.
 — —, fungi on stored, Armenian SSR, 420; India, 3557; effect on, 3748.

Venturia carpophila on peach, 2122.
 — — *chlorospora* on poplar and *Salix*, 3020.
 — — *inaequalis* on apple, see Apple.
 — —, *Trichothecium roseum* parasitizing, Yugoslavia, 3572.
 — — *macularis* on poplar, 3019.
 — — preferred name for ascal state of *Pollacia radiososa*, 1163.
 — — *pirina* on pear, see Pear.
 — —, *Trichothecium roseum* on, Yugoslavia, 3572.
* — *populina* on aspen and poplar, 257f.
Verbesina encelioides, *Dahlia* mosaic virus on, inclusions indistinguishable from caulin-flower mosaic virus, 909m.
Verdasan against *Pyricularia oryzae* and toxicity to rice, 327a.
Vernonia cinerea leaf extracts as seed treatment for cucumber, 3542.
Verticillium albo-atrum, cluster spore prints, 695.
 — — cultural and morphological variation, 33.
 — —, distinction from *V. dahliae*, 1994.
 — —, effect of ozone on germination, 671.
 — —, hosts, 855, 2032.
 — — in Armenian SSR, 2032; USA, 855.
 — — in soil, see Soil.
 — —, morphogenesis and respiration, 1278.
 — — on *Chrysanthemum*, 2087.
 — — on *C. indicum*, 3332.
 — — on cotton, see Cotton.
 — — on *Gerbera*, 775, 3338.
 — — on hop, 2725f.
 — — on *Laurus nobilis*, 2507.
 — — on lucerne, see Lucerne.
* — — on *Pelargonium graveolens*, 1682.
 — — on potato, see Potato.
 — — on tomato, see Tomato.
 — — on tulip, 178.
 — —, respiration of conidia, 1949, 1950, 3630.
 — —, review, 855.
 — —, taxonomy, 964.
 — —, ultrastructure of microsclerotia, 2730.
 — — var. *menthae* on *Mentha cardiaca* and peppermint, 2579.
 — *cinerescens* on carnation, 494, 1674.
 — — on *Caryophyllaceae*, 2500.
 — *dahliae*, aggressiveness of str., 2326.
 — —, cluster spore prints, 695.
 — —, cultural and morphological variation, 33.
 — —, distinction from *V. albo-atrum*, 1994.
 — —, effect of biotin and thiamine on, 948; ozone on germination, 671; plant excretions on development, 1964; quinoline n-oxide, 3629.
 — —, germination of microsclerotia, 949.
 — —, growth on different C sources, 950.
* — —, hosts, 3182b.
 — — in soil, 1067.
 — —, morphogenesis and respiration, 1278.
 — — on apricot, 1729.
 — — on *Begonia*, 2085.
 — — on cotton, see Cotton.
 — — on eggplant, 2278, *2721.
* — — on *Euphorbia pulcherrima*, 3335.
 — — on *Gerbera*, 3338.
 — — on groundnut, 307.
 — — on *Hibiscus esculentus*, 3550.
 — — on lucerne, 508.
 — — on melon, 568.

[*Verticillium dahliae*] on olive, 911.
 — on peppermint, 2150, 3424.
 — on potato, see Potato.
 — on *Solanum gilo*, 1535.
 — on soybean, 1522.
 — on strawberry, see Strawberry.
 — on tobacco, 1777, 2177.
 — on tomato, 255, 568, 3484.
 —, separating toxic substances, 2792.
 —, taxonomy, 964.
 — *lateritium*, cluster spore prints, 695.
 — *malthousei* on mushroom, 634, 909.
 — *nigrescens*, cluster spore prints, 695.
 — on cotton, 154, 3303, 3304.
 —, variation on different media, 33.
 — *nubilum* on potato, 235c.
 Vetch (*Vicia*), *Pythium debaryanum* and *P. dissotocum* on, NSW, 2728d.
Viburnum edule, *Godronia viburni* on Canada, pathogenicity, 858.
Vicia, see Vetch.
 — *faba*, see Bean, broad.
 — *sativa*, pea enation mosaic virus can infect, 292.
 — *villosa*, pea seed-borne virus disease on, new, 5n.
 Victorin, effect on bean, 3634; oats, 121, 1009, 2840.
 — inactivation by oat tissue, 122.
 — produced by *Cochliobolus victoriae*, 121, 1623.
 —, resistance to, 332a.
 —, sensitivity of oat mutants to, 1348.
Vigna radiata, *Xanthomonas phaseoli* on, Sudan, pathogenicity, 305.
 — *sinensis* var. *sesquipedalis*, *Mycosphaerella cruenta* on, India, 606.
 — *unguiculata*, see Cowpea.
Vinca minor, *Phyllosticta vincae-majoris*, *P. vincae-minoris*, *Robillarda vincae* and *Septoria vincae* on, 2513.
 — *rosea*, aster yellows on, Rumania, 981; control, 712; effect of antibiotics, 354; mycoplasma-like bodies, 981, 2025.
 —, citrus ringspot virus on, symptomless host, 1373.
 — little leaf, ?mycoplasma causing, 317.
 Vine, see Grapevine.
 Viruses in Far East, India, 881, 3690; Iraq, 697; USSR (Far East), conference, 2360; Yugoslavia, 2361; activation analysis in research, 1248i; Advances in research, Vol. 15, 3149; architecture of small, 331; cell inclusions, 2366; classification, 1304, 3150a; chemotherapeutic research, 3692; cluster analysis of proteins, 3152; conformation of nucleic acids, 3149d; Contribution to systematic plant virology, Danish book, 3689; counting particles, 3695; cryptograms for, 3150b; detection in tissues, 396; double stranded RNA, 3149b; electrophoresis, 75; evolution as parasites, 2362; heat therapy, 975, 1260n; immunoelectrophoretic characteristics, 909r; in fungi, 415; in plant hosts, form, distribution and pathologic effects, book on, 696; investigations, 2361; isolation of gamma-globulins from antisera against, 701; lyophilization of antisera, 2793; methods of obtaining plants free from, 1575d; mycoplasma-like bodies in relation to, 2383; nomenclature, 1304; nucleic acid, 1248h; phytoferritin in relation to, 2365; preserving, 2727p; proper-

ties, 3077c; research, 3729c; respiration in tissues, 2364; review of work at Ukrainian Academy of Sciences, 2016; serological detection and diagnosis, 699, 700, 1538m, 3694; thermal inactivation, 2363; transmission, 1560; by beetles, 3149e; by fungi, 1307; by pollen, 698; translation of messenger RNA in vitro, 3149c; ultrastructure of infected tissues, 3557e; unusual str., USSR, 2369; use of insect tissue cultures in research, 1260d; isotopes in, 1248g.

[Viruses], vectors and vegetation, textbook, 2010.

Vitamins, effect on *Curvularia pallescens* on eggplant, 3636; growth and sporulation of fungi, 2763.

Viravax against *Colletotrichum agaves* on sisal, 1046; *Corticium solani* on cotton, 3310; *Ustilago nuda* on wheat, 108, 443; as seed treatment for barley, 989, 3225; cotton, 1040; wheat, 107, 989, 1597; as soil treatment, 107.

— degradation in cotton, 1041.
 —, effect on *Corticium rolfsii*, *C. solani* and *Typhula incarnata*, 2727n.
 — in Czechoslovakia, 3593d.
 — toxicity to cotton, 3310.
 — translocation in cotton, 1039.
 — 75 against *Ustilago nuda*, 2408.
 — D.735 against *U. nuda* on barley, 1345; as seed treatment for wheat, 1538z.
 — GL against *U. nuda*, 2408.
 —, see also DMOC.

Voronit against *Calonectria nivalis* on rye and *Tilletia caries* on wheat, 1537k.

Waitea circinata on pine, 1494.

Wallflower (*Cheiranthus*) virescence, mycoplasma-like bodies associated, 502.

Wallrothiella arceuthobii parasitizing *Arceuthobium*, 687.

Walnut (*Juglans*) bacterial disease, USSR, similarity to *Xanthomonas juglandis*, 2670.

—, *Erwinia nigrifluens* and *E. rubrifaciens* on, USA, 3022.

Watercress (*Nasturtium officinale*) diseases, Fla, 330h.

*Watermelon (*Citrullus vulgaris*), *Alternaria cucumerina* on, India, hosts, physiology and taxonomy, 3546.

—, *Colletotrichum lagenarium* on, mode of infection, 2717.

—, cucumber mosaic virus can infect, 1478.
 — diseases, India, 87.

—, *Erysiphe cichoracearum* on, var. react., 3070.

—, *Fusarium oxysporum* f.sp. *lycopersici* on, control, 3749.

—, — ff.sp. on, fusaric acid in selective pathogenicity, 940.

— mosaic, caused by three viruses, 2008c.

— virus, inhibition by plant sap, 311.

— — on cantaloupe, 623.

— — on pumpkin, 622.

— — — on squash, 312, 622.

— — — on vegetable marrow, 2269.

— — —, transmission by mechanical root inoculation, 1238.

—, peach stem pitting virus can infect, 3565d.

—, *Phytophthora drechsleri* on, Iran, 1530.

—, *Pseudoperonospora cubensis* on, factors affecting, 2270.

GENERAL INDEX

[Watermelon], *Sphaerotheca fuliginea* on, var. react., 3070.

Wax, use on apples, 793.

Weeds, *Cephalosporium gramineum* on, 2307h.

—, cucumber mosaic virus on, UK, source of infection for lettuce, 3555i.

—, effect on tobacco rattle virus on potato, 3557h.

—, grey sterile fungus on, 1095.

Western celery mosaic virus, hosts, 3066.

—, Regional Project W-38, 2800.

Wheat (*Triticum*), *Achromobacter* and *Agrobacterium radiobacter* in rhizosphere, 1001.

—, *Alternaria* on, effect of tilling, 1615.

—, — *alternata* on, USSR, 2044, 3207.

—, — *triticina* on, India, var. react., 3770; apparatus for measuring intensity, 1336.

—, *Arthrobacter* in rhizosphere, 1001.

—, *Ascochyta graminicola* on, UK, 2410.

—, barley stripe mosaic virus on, systemic symptoms, 3192.

—, — virus A₁ can infect, 3776.

—, — yellow dwarf virus on, var. react., 3078a.

—, brome mosaic virus on, USSR, 1566; effect on resistance to *Puccinia recondita*, 992.

—, brown necrosis, Peru, fungi associated with, 993.

—, *Calonectria nivalis* on, assessing, 3775; effect of root exudates on conidial germination, 999.

—, *Cellulomonas* in rhizosphere, 1001.

—, *Cephalosporium gramineum* on, ?association of polysaccharide with, 1335; control, 1611; factors affecting, 1610, 1611.

—, cereal bullet-shaped virus on, transmission by vectors, 1581.

—, *Cercospora herpotrichoides* on, NZ, 2829; breeding against, 3772; control, 2d, 3210; effect of CCC, 1612, 2411; of crop rotation, 2c, 2426, 3774a; of root exudates on conidial germination, 999; effect on yield, 2427; factors affecting, 2427, 2829; hyphal and nuclear fusion of isolates, 2425; investigation, 3556h; susceptibility, 2c; var. react., 3078a.

—, *Claviceps purpurea* on, resistance, 3212.

—, *Cochliobolus sativus* on, USSR, 1000, 2044, 3207; antagonism of *Trichoderma viride*, 681; control, 1614; effect of tilling methods, 1615; of toxic metabolites, 1332; factors affecting, 1000, 3205, 3206; pathogenesis, 3207; var. react., 1613, 2424.

—, *Corticium rolfsii* on, control, 3211.

—, — *solani* on, Rumania, description, 2428.

—, *Corynebacterium tritici* on, Ethiopia, 918; Iran, control, 445.

—, disease, USA, similarity to wheat spot mosaic virus, transmission by eriophyid, 2034.

—, diseases, 3556h; India, 3193, 3759; NSW, 986; apparatus for seed treatment, 1574; var. react., 3193.

—, dwarf virus on wheat in *Sweden, 3752; USSR, 1587; effect on metabolism, 991.

—, *Endogone* on, forming mycorrhiza, in UK, 2748.

—, *Erysiphe graminis* on, Czechoslovakia, 2822; *India (Mysore), 110; USSR, 2422; Yugoslavia, 1602, 1603; assessing, 3775; breeding against, 3556c; control, 1602, 2042; effect of Ca cyanamide, 3769; of CCC, 2411; of fly ash, 729; of herbicides, 3769; of milstem (ICI), 733; of systemic fungicides, 3556h; factors affecting, 1602; genetics, 1331, 1605; germination of conidia, 1606; investigations, 3556h; overwintering, 1603; penetration, 1604; physiologic races, 728, 1582b, 1602, 2822, 3757; resistance, 2423a, b; symptom expression, 2409; technique for diagnosing, 74; var. react., 728, 1582b, 1604, 2422.

[Wheat], *Flavobacterium* in rhizosphere, competition between *Fusarium culmorum* and, 1001.

—, frost injury, NSW, 986.

—, fungi in rhizosphere, USSR, 1961.

—, — on stored, factors affecting, 2430.

—, *Fusarium* on, Finland, 3754; USSR, 1000, 2044; antagonism of *Trichoderma viride*, 681; control, 3754; factors affecting incidence and resistance, 1000, 3206, 3215.

—, — *avenaceum* on, effect of root exudates on conidial germination, 999.

—, — *culmorum* on, competition between bacteria in rhizosphere and, 1001; effect of root exudates on conidial germination, 999; resistance, 3771.

—, *Gibberella zeae* on, effect of root exudates on conidial germination, 999; inoculating, 731, 2826, 2827.

*—, *Gibellina cerealis* on, Rumania, description, 2428.

—, *Helminthosporium* on, factors affecting resistance, 3215.

—, *Leptosphaeria nodorum* on, assessing, 3775; breeding against, 1609; damage, 2043; effect of CCC, 2411; of zineb, 1608; effect on, 444, 2043; epidemiology, 111; factors affecting, 3209; inoculating, 3208.

*—, *Leptosphaerulina trifolii* on, India, 1337.

—, *Macrophomina phaseoli* on, factors affecting, 1576.

—, manganese deficiency in, var. react., 3190.

—, *Mastigosporium album* on, Scotland, 1870a.

—, microflora in rhizosphere, changes induced by chromosome 5B, 2825.

—, mosaic virus, transmission by phycomyces, 415.

—, oats sterile dwarf virus can infect, 3229.

—, *Ophiobolus graminis* in rhizosphere, growth, 3077b.

—, — on, 1333, 1585; control, 3077b; effect of crop rotation, 2c, 3774b; of DNOC and quintozone, 1334; of light, 2830; on yield, 635f; enzyme production, 3758a, b; factors affecting, 998, 3191; investigations on, 3556h.

—, *Pseudomonas* in rhizosphere, competition between *Fusarium culmorum* and, 1001.

—, *Puccinia* on, Ethiopia, 918; review of literature on control, 2812.

—, — *coronata* on, Iran, identification, 988.

—, — *graminis* on, Canada, 3189; Czechoslovakia, 101, 2813, 3762; Ethiopia, 918; Iran, 988; Kenya, 325, 1326, 2406; UK, 2405; USA, 2416, 2417; USSR, 434, 2033, 3761; Yugoslavia, 1589, 1590; accounting for variation in numbers of uredospores, 2417; betaine formation and formate meta-

bolism, 3195; breeding against, 103, 3761; characterization of epidemics, 431; CPI and NPI ineffective against, 1549; effect of dew on growth of uredospore germ tube, 1324; effect on proteins and nucleic acids in leaves, 3764; enzyme activity, 2415; epidemiology, 2406; factors affecting, 436; reaction, 100; genetics, 99, 1326, 1588, 2414, 3194; germination of uredospores, 1247b; growth, N content and O uptake, 2036; growth from uredospores, 98; identification, 988; losses, 3762; metabolism, 331t, 3765; of phenols, 723; of propionate, 994; of tryptophan, 432; nucleolus of uredospores, 2038; physiologic races, 101, 434, 1589, 1590, 1591, 2406, 2416, 3763; production of new races, 1592 resistance, 104, 435; specialized form, 2033; survival of uredospores, 433; var. react., 101, 325, 723, 724, 918, 1589, 1591, 2813, 2814.

[Wheat, *Puccinia*] *hordei* on, Iran, 988.

—, — *recondita* on, Canada, 3189; Czechoslovakia, 102, 3762; India, 3767; Iran, 988; Kenya, 2406; UK, 2405; USA, 2417; USSR, 439, 1329, 2422, 2811, 3761; asexual variation in virulence, 455; biology of races, 2421; breeding against, 103, 3761; characterization of epidemics, 431; control, 725; culturing, 3766; effect of amino acids on development, 1593; of viruses on resistance 992; effect on, 2418; epidemiology, 2406; factors relating to water balance, 2419; forecasting, 3198; genetics of resistance, 1328, 1594, 3196, 3197; host-parasite interaction, 1327; investigating, 3556h; losses, 3762; physiologic races, 102, 1328, 1329, 2406, 2811, 3767; biotypes, 439; competition between, 437, 438; differentiation, 2420; resistance, 104, 995, 2040; variation in numbers of uredospores, 2417; var. react., 2418, 2422.

—, — + *Leptosphaeria nodorum* on, effect on yield and interaction, 3199.

—, — *striiformis* on, Czechoslovakia, 726; Germany (E.), 2284; Iran, 988; Netherlands, 1538y; Poland, 1330; UK, 2405; USA, 1595, 1596, 3201, 3203; USSR, 727, 2811, 2816, 3761; breeding against, 3556c, 3761; control, 1330; diagnosing, 74; effect of CCC, 2411; of milistem (ICL), 733; of water stress and on roots, 3202; effect on, 3201; epidemiology, 1596; factors affecting, 105, 1595, 1596, 2405, 3203; genetics, 105; germ tube fusions, 440b; heterokaryosis, 2816; identification, 988; incidence, 1330; investigations on, 3556h; micro-organisms associated with, 1595; nuclear number and size, 440b; peroxidase activity, 3213; persistence, 1595; physiologic races, 440a, 726, 727, 1538y, 2811; resistance, 104, 3200; respiration, 3768; survival, 1596, 2815; var. react., 727, 2814, 3200.

*—, *Pyrenophora graminea* on, USSR, 2046.

*—, *Pythium irregulare* on, India, 3181a.

—, *Rhynchosporium secalis* on, var. react., 3078a.

—, rice stripe virus on, purification, 751.

— root elongation, effect of Al on, 1616.

*—, *Sclerospora macrospora* on, Pakistan, 730.

— seed-borne fungi on, methods for studying and pathogenicity, 2429.

— seed diseases, control and factors affecting germination, 3755.

[Wheat], *Septoria* on, Ethiopia, 918.

—, — *tritici* on, India, 1607; Wales, 3730b; effect of zineb, 1608; epidemiology, 111; factors affecting, 3730b; inoculating, 3208; key for assessing severity, 111; symptoms, 3730b; var. react., 1607.

—, *Setaria* mosaic virus on, symptoms, 5i.

— 'slidsjuka' disease, Sweden, similarity to wheat dwarf virus, 3752.

— soil-borne mosaic virus on wheat, factors affecting systemic symptoms, 3192; genetics, 1594; inoculating, 3760.

— spindle streak mosaic virus, soil-borne, Canada, development of, 2413.

— streak mosaic virus, distribution in *Aceria tulipae*, 429.

— — — — on barley, 3216.

— — — — on maize, 127a, b.

— — — — on wheat, *USA (Va), 428; effect on ectodesmata, 2412; on protein, 2810; on resistance to *Puccinia recondita*, 922.

— striate mosaic virus, in *Delphacodes pellucida*, 3077i; *Endria inimica*, 430.

?— — — — on wheat, Norway, 424; effect on metabolism on NPK, 991.

— striped mosaic virus in *Psammotettix alienus*, 1537b, c.

— — — — on rye, 1537c.

— — — — on wheat, Poland, incidence, 1537b; incubation period, 1537c; transmission by vectors, 1537b.

—, *Tilletia caries* on, Yugoslavia, 1598; biochemistry, 1601; cation composition, 1599; control, 1537k, 1583, 1600; nature of foci, 2802.

—, — *contraversa* on, obtaining inoculum, 2817.

—, — *foetida* on, Yugoslavia, 1598; nature of foci, 2802.

—, — *intermedia* and *T. triticoides* on, Yugoslavia, 1598.

—, *Typhula* on, Finland, 3754.

—, — *incarnata* on, Scotland, 1870c.

—, *Urocystis agropyri* on, control, 107.

—, *Uromyces iranensis* on, Iran, identification, 988.

—, *Ustilago nuda* on, 443, 1538z; India, 732; USSR, 2818; chlamydospore germination, 3204; control, 107, 108, 442, 989, 1597, 2308d, 2408; detection, 1322, 2041; distribution, 2818; effect of antibiotics, 3756; factors affecting, 441; inoculating, 1323, 2821; physiologic races, 2818; selecting resistant var., 2820; specialization, 2818; spore germination, 2819; var. react., 109, 732, 997, 2819, 3078a.

*— variegation' disease, hosts, symptoms and transmission by vectors, 5h.

*— virus diseases, Sweden, 3752.

— (winter) mosaic virus, USSR, transmission by vectors, 1587.

— straw, *Cephalosporium gramineum* on, ?cephalosporin C produced by, 1335.

— —, *Cochliobolus sativus* on, effect of mercuric chloride, 2824.

— —, buried, fungi on, effect of soil treatment, 2828.

Wisteria vein mosaic virus on *Wisteria*, Italy, 2013; Netherlands, 2012; properties, 2013; symptoms, 2012; transmission by vectors, 2013.

Wolman salts as timber preservative, 587.

GENERAL INDEX

Xanthium strumarium, tobacco ringspot virus on, epidemiology and transmission by vectors, 3700.

Xanthomonas albilineans on maize, 3560f.

*— — on sugarcane, see Sugarcane.

?— *ampelina* on grapevine, 813.

— *airoviridigena* on rice, 2062.

— *axonopodis* on tobacco, 3581.

— *begoniae*, Iran, 910d.

— — on *Begonia*, 1393, 1870e, 2085.

— *campestris*, Iran, 910d.

— — on cabbage, 2219, 3042, 3505.

*— — on *Capsella bursa-pastoris*, 886.

— — on cauliflower, 2219.

— *citri* inhibited by antibiotic from *Streptomyces griseoplanus*, 3108.

— — on citrus, 1651, 2804.

— *cymopsidis* on *Cyamopsis psoraloides*, 2249.

— *dieffenbachiae* on *Philodendron oxycardium*, 330o.

— *floridana* ?causing sugarcane red stripe disease, 2625.

*— *guizotiae* var. *indicus* on *Guizotia abyssinica*, 1108.

— *gummisudans* on *Gladiolus*, 1392.

— *hyacinthi* on hyacinth, 1392, 3342.

— *itoana* on rice, 2062.

— *juglandis*, bacterial disease of walnut similar to, 2670.

— *malvacearum* inhibited by antibiotic from *Streptomyces griseoplanus*, 3108.

— — on cotton, see Cotton.

— *manihotis* on cassava, 2724.

— *nakatae* var. *fascicularis* on *Corchorus fascicularis*, 2083.

— *oryzae*, CMI description, 3090.

— inhibited by antibiotic from *Streptomyces griseoplanus*, 3108.

— — Taiwan, distribution of strs., 1023.

— — on rice, see Rice.

— *oryzicola*, CMI description, 3090.

— — on rice, see Rice.

— *passiflorae* on passion fruit, 2139.

— *pelargonii*, Iran, 910d.

— — on *Pelargonium*, 2282c.

— *phaseoli*, bacteriophages classification, 3096.

— — on bean, see Bean.

— — on *Lablab niger* and *Vigna radiata*, 305.

— — var. *sojense* + *Pseudomonas glycinea* on soybean, 304.

— *pruni* on fruit, 192.

— — on peach, 1728.

— *sesami* on sesame, 493.

— *translucens* associated with wheat brown necrosis, 993.

— *uppalii* on *Ipomoea*, 639.

— — on *Tropaeolum majus*, 779.

— *vasculorum* on sugarcane, 917a.

— *vesicatoria*, differentiation of pathotypes and hosts, 14.

— — on *Capsicum*, 1262.

— — on tomato, 328f.

— *vignicola* on cowpea, 1853.

— *vitiens*, bacterium on *Syngonium podophyllum* resembling, 5g.

Xiphinema americanum transmitting cherry rasp leaf virus, 208; tobacco ringspot virus, 3416, 3700; tomato ringspot virus, 1399, 2195.

[*Xiphinema*] *diversicaudatum* not transmitting cherry rasp leaf virus, 208; grapevine 'panachure', 2565.

— — transmitting *Arabis* mosaic virus, 633, 2367; strawberry latent ringspot virus, 2367; viruses of stone fruit, 3384.

— — index not transmitting grapevine 'panachure', 2565.

— — and *X. italicae* transmitting grapevine fanleaf virus, 221, 2143.

— — *mediterraneum* not transmitting grapevine fanleaf virus, 2143.

X-rays, effect on *Agrobacterium tumefaciens* on tobacco, 850.

Xylariaceae, cultural characters and morphology, 3141.

Xylaria ?*thwaitesii* on *Hevea* rubber, 2163b.

Yam (*Dioscorea* spp.), *Aspergillus niger* and *A. tamarii* on, Nigeria, 3552.

—, *Botryodiplodia theobromae* on, India, 3553; Nigeria, 3552.

*— mosaic disease, Nigeria, transmission by tubers, 327d.

—, *Penicillium oxalicum* on, and storage disorders, Nigeria, 3552.

Yeasts, Vol. 1, Biology of yeasts, book on, 1539.

—, classification serologically, 332h.

—, effect on infectivity of potato virus X on potato, 1453; on tobacco, 2173.

— in mycangium of *Dendroctonus ponderosae*, 3038.

— on barley, stored, 2835a.

—, symposium on, 1969, 3670.

Yew (*Taxus baccata*), *Armillaria mellea* on, control, 1157.

Zantedeschia aethiopica, *Erwinia aroideae* on, Argentina, 2086.

Zea mays, see Maize.

Zinc against *Mycosphaerella brassicicola* on Brussels sprouts, 2218; as seed treatment for potato, 1754c, 2607.

—, effect on hop leaf curl virus, 1537g; on *Synchytrium endobioticum*, 1456.

— toxicity in chestnut, 913.

—copper-lime against *Septoria citri* and *S. limonum* on citrus, 1024.

— fungicides against cotton boll rot, 3298c.

— sulphate against hop leaf curl, 2575; as soil treatment, 2575, 2576.

Zineb, adaptation of *Corticium solani* to, 3601.

— against *Acroconidiella tropaeoli* on *Tropaeolum majus*, 1685; apple storage disorders, 2536; carrot diseases, 1527; *Fusarium* on *Sansevieria*, 3350; *Gerbera* diseases, 775; *Gibberella fujikuroi* on *Sansevieria*, 3350; *Gloeosporium folicola* on citrus, 2073; *Guignardia citricarpa* on orange, 2074; hop leaf curl, 2575; *Leptosphaeria coniothyrium* on rose, 3349; *L. nodorum* on wheat, 1608; *Macrophoma georgica* on *Laurus nobilis*, 1681; *Mycosphaerella ribis* on currant, 1092; on gooseberry, 3394; *Peronospora tabacina*, 1481, 2643; *Phoma urens* on poplar, 270; *Phytophthora infestans* on potato, 3446; *Plasmopara viticola*, 3593a; *Pseudopeziza ribis* on currant, 2925; *Puccinia pelar-*

GENERAL INDEX

gonii-zonalis on *Pelargonium*, 2509; *P. sorghi* on maize, 460, 3241; *Pyricularia oryzae* on rice, 327a; *Pythium aphanidermatum* on crop plants, 1900; *Ramularia vallisumbrosae* on *Narcissus*, 177; *Septoria lycopersici*, 2651, 3002; *S. tritici* on wheat, 1608; *Trichocomesphaeria turcica* on maize, 2461; *Uromyces dianthi* on carnation, 169; *Venturia inaequalis*, 787, 1422; *V. pirina*, 1422; as seed treatment for rice, 3267; as soil treatment, 1167. [Zineb] causing N deficiency in sugarcane, 2984. —, effect on grapevine, 2946. — injury to *Euphorbia pulcherrima*, 1400. — 80 against *Plasmopara viticola*, 2567. *Zingiber officinalis*, see Ginger. *Zinnia*, *Cochliobolus miyabeanus* on, 141. —, *Corticium rolfsii* on, India, 3423. —, — *solani* on, India, 85a. —, cucumber mosaic virus can infect, 1478.

[*Zinnia*] *Dahlia* mosaic virus on, electron microscopy, 3177. *—, plum pox virus on, 3387. *Zinocop* against *Cephaeuros parasiticus* and *Corticium inquisitum* on tea, 2628. *Ziram*, against *Fusicoccum amygdali* on peach, 2923; *Mycosphaerella ribis* on gooseberry, 3394; *Podosphaera leucotricha*, 789; *P. oxyacanthae* var. *tridactyla* and *Sclerotinia laxa* on apricot, 1433; *Sphaerotheca pannosa* var. *persicae* on peach, 1090; *Uromyces dianthi* on carnation, 169; *Venturia inaequalis*, 787. —, effect on winter necrosis of peach, 3391. *Zireb aglukon* against *Phytophthora infestans* on potato and tomato, 2310. *Zizania*, *Entyloma lineatum*, *Claviceps purpurea* and *C. zizaniiae* on, 2066. **Zizyphus jujuba*, *Agrobacterium tumefaciens* on, Egypt, 344.

